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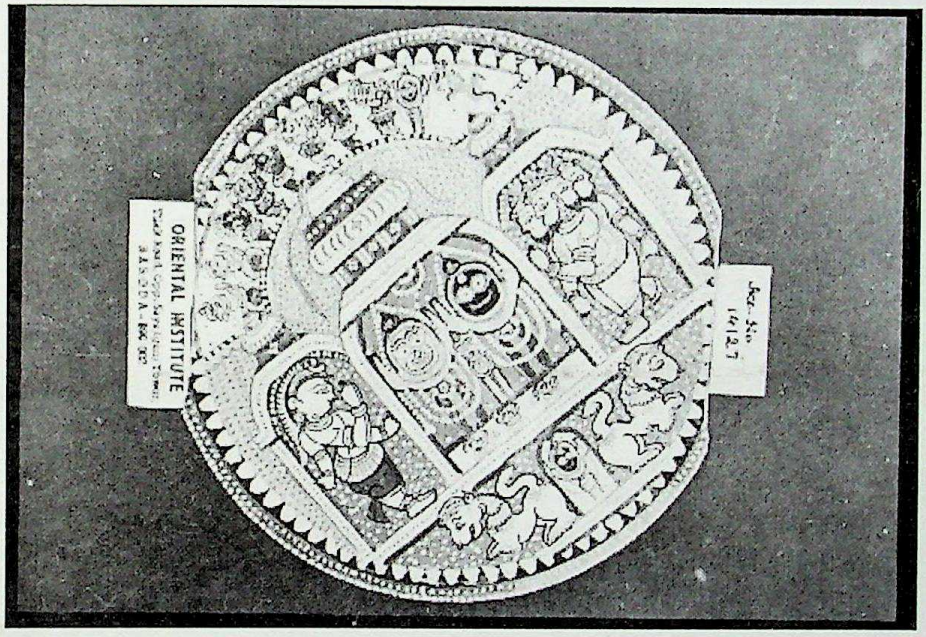

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A STUDY OF METARULES BASED ON ŚĀSTRA

- Ratish Chandra Jha *

Introduction

The history of Sanskrit *vyākaraṇa* is very old and comprehensive. Although there were too many schools of Grammarians before Pāṇini, it is only the extant *Aṣṭādhyāyī* or 'The Grammar in Eight Chapters' of Pāṇini that represents the acme of the Indian tradition of knowledge. This tradition is known as '*Trimuni Vyākaraṇam*.' Pāṇini initiated this tradition by enunciating the *Aṣṭādhyāyī* in *sūtra* form. There are about four thousand aphorisms in the *Aṣṭādhyāyī*.[1] Ācārya Kātyāyana comes after Pāṇini, who has composed about an equal number of *vārttikas*. A *vārtika* is a critical comment on the inadequacy of the *sūtras* that Kātyāyana comes across in the Grammar of Pāṇini. It is more or less a supplementary work, suggesting additions and emandations regarding the *sūtras*. In the tradition of the '*Trimuni*,' Patañjali comes third, who has written the *Mahābhāṣya* or the 'Great Commentary,' which is a scholarly work raising objections, giving answers and discussing critically various relevant topics. Patañjali presses into service the 'implied hermeneutical principles' to explain the *sūtras*. These principles not only relate to Sanskrit grammar and linguistics, but also to logic, philosophy and life. His discussions also reflect methodological precision. Kielhorn[2] has discussed, with illustrations, some of the techniques that the *Mahābhāṣya* uses elaborately discussing the *sūtras*. Some of the techniques used in the *Mahābhāṣya* are: *yogavibhāga*

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1. Abhayankar, K.V., '*Paribhāṣāsaṅgraham*,' Bhandarkar Oriental Research Institute, Poona, 1967. page-2. - The number of *sūtras* in the traditional recital of the *Aṣṭādhyāyī* as a *Vedāṅga* is 3983. Out of these, nine *sūtras* were in the form of *vārttikas* and two in the form of *gaṇasūtras* at the time of the *Mahabhāṣya*. The number of *sūtras*, hence, was 3972 at the time of Patañjali. The following verse, current in the Vaiyākaraṇa schools, 3996. The verse is

   'trīṇi sūtrasahasrāṇi tathā nava śatāni ca.
   saṇṇavatiś ca sūtrāṇāṁ pāṇiniḥ kṛtavān svayam..'

   The number 3996 can be explained by dividing a few *sūtras* into two each, as suggested sometimes in the *Mahābhāṣya*.

2. Kielhorn, F.K.- 'Notes on the *Mahābhāṣya* : Some Devices of Indian Grammarians' In Staal, 1972(123-34).

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'splitting of a rule into two or more,' *anabhidhāna* 'that which is not current among the *śiṣṭas*,' *anuktasamuccaya* 'gathering something not stated,' *jñāpaka* 'implication derived on the basis of Pāṇini's practice,' etc. These interpretive techniques show the analytical acumen of Patañjali. Above all, they show his intention and capability to accomplish the goal stated by the *sūtra* and provides a strong foundation to the Pāṇinian school of thought. In this way, the purpose of a *bhāṣya* is to make a *sūtra* easy of comprehension and the purpose of a *vārttika* is to complement a *sūtra*.

The *Aṣṭādhyāyī* has been adjudged as the best grammar ever written for any language. Leonard Bloomfield calls it "one of the greatest monuments of human intelligence."[3] The intellect of Pāṇini lies in his *sūtra*-formulation and its brevity.[4] Pāṇini's grammar also serves as a means towards understanding sentences. This goal is accomplished by abstracting generalization from usage and formulating rules which best capture that usage. The Pāṇinīyas too recognize that the Pāṇinian grammar is a means of the explaining (*anvākhyāna*) the usage (*śiṣṭa-prayoga*). Indeed, they go further and maintain that grammar merely explains the data of perennial usage. In order to facilitate proper formulation, interpretation and application of rules, however, a grammar also requires a meta-theory. This, Pāṇini brilliantly supplies. In doing so, he carefully defines terms (*saṁjñā*), sets forth metarules (*paribhāṣāsūtras*)[5] and outlines the conventions he follows. However, given the *sūtra* style of rules, one must make inferences; test and reject or accept them depending on whether or not they are in consonance with Pāṇinian practice. Such a procedure is the primary task of *vyākhyāna* which, in addition to being instrumental in the proper understanding of *sūtras*, has also contributed many proposals, which are incorporated in the *Aṣṭādhyāyī*.

Pāṇini's rules have been classified in different categories on the basis of their nature, scope and application. Generally, Pāṇinīyas (commentators of Pāṇinian grammar) have

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3. Bloomfield, Leonard. - *Language*; 1931, pp-11, New York: Henry Holt.

4. Abhayankar, MM. K.V.
'*Paribhāṣāsaṅgraham*,' Bhandarkar Oriental Research Institute, Poona, 1967.
Introduction, Page-1
The *Paribhāṣā 'ardhamātrālāghavena putrotsavam manyante vaiyākaraṇāḥ'* is a proof of such brevity noticed in the rules of Pāṇini. The remark of Patañjali, "*pramāṇabhūta ācārya darbhapavitrapāṇiḥ śucāvavakāśe prāṅmukha upaviśya mahatā prayatnena sūtrāṇi praṇayati sma. tatrāśakyaṁ varṇenāpyanarthakena bhavituṁ kiṁ punarayitā sūtreṇa*": Mbh. P. 1. 1. 1, vtk 8; exalts the brevity of Pāṇini's sūtras. See also the definition of the word *sūtra* in this connection which is given as follows :
alpākṣaram asandigdhaṁ sāravad viśvatomukham.
astobham anavadyaṁ ca sūtraṁ sūtravido viduḥ..

5. Cardona, George
"The *Aṣṭādhyāyī* contains metarules (*Paribhāṣāsūtras*) that serve to interpret other rules in this text." - *Pāṇini: His Work and Its Tradition*. pp-52; Motilal Banarsidass Publishers Private Limited, Delhi. 1997.

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classified the rules of Pāṇinian grammar in six categories – technical rules (*saṁjñā*), interpretive rules or metarules (*paribhāṣa*), operation rules (*vidhi*), restriction rules (*niyama*), extension rules (*atideśa*) and heading rules (*adhikāra*). Thus the purpose of a rule, in general, is to account for correct Sanskrit utterances. This, in turn, is accomplished by applying required rules to appropriate input, such that the last such application yields an output which is the target utterance.

We find three currents in the *Vyākaraṇa śāstra* – formation of words (*śabda- siddhi*), determination of the sense of words (*śabdārtha-niścaya*) and the determination of the sense of rules (*sūtrārtha-nirṇaya*), which originate from the single stream of the *Aṣṭādhyāyī* of Pāṇini. The *Aṣṭādhyāyī* has a large number of *sūtras* dealing with the formation of words as found used in the Vedic and the spoken Sanskrit language. The *Vārttikakāra* has given many rules in this respect, to which a very valuable addition is made by the author of the *Mahābhāṣya* by means of his elaborate annotations and *iṣṭis*. There are some *sūtras* in the *Aṣṭādhyāyī* which lay down rules of interpretation which are helpful for the right and proper interpretation of the *sūtras*, as also for their proper application in cases of conflict. Such rules are called *paribhāṣās* (metarules). Pāṇini has not used the term *paribhāṣā* in his grammar, but he has enunciated such rules mainly in the first quarter of the first chapter of the *Aṣṭādhyāyī*.

In this paper, the study of metarules, based on the *śāstra* with special reference to the *Paribhāṣenduśekhara* of Nāgeśa Bhaṭṭa and its commentaries, is the main concern. Nāgeśa, a versatile scholar who flourished during the period between the last quarter of the seventeenth century and the beginning of the eighteenth, wrote a masterly work entitled the *Paribhāṣenduśekhara* on the *paribhāṣās* which number about one hundred and thirty three. This is a well-known work, which is studied by the advanced students of Sanskrit *vyākaraṇa* in all the oriental schools and colleges. Its significance is known from the number of commentaries on it, such as, the *Gadā* of Vaidyanātha Pāyaguṇḍe, the *Bhairavī* of Bhairava Miśra, the *Bhūti* of Tātyāśāstrī, the *Sarvamaṅgalā* of Śeṣaśarmā, the *Tattvādarśa* of Vāsudeva Śāstrī Abhyaṅkara, the *Paribhāṣenduśekhara* (Text, Translation and Notes) of F. Kielhorn, the *Vijayā* of Jayadeva Miśra etc. These commentarial works throw ample light on the intellectual capability of Nāgeśa as a grammarian *par excellence*. From the references to the ancient and the mediaeval authors of grammatical treatises by the terms such as '*prācīna*,' '*kaścit*,' '*kecit*' and the like, it is evident that the author had made a very careful and deep study of those works. Vaidyanātha Pāyaguṇḍe in his commentary, the *Gadā*, which is also known as the *Kāśikā*, provides information about the sources given by Nāgeśa while commenting on the *paribhāṣās*. Nāgeṣa has differed with the old authorities on grammar such as Vāmana, Jayāditya, Kaiyaṭa, Haradatta, etc. and criticized their views quoting mainly from the *Mahābhāṣya*. It is his extensive and vertical study of the great commentary of Patañjali that has attracted great scholars towards him with a deep sense of respect. The

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Paribhāṣenduśekhara is looked upon as the final word on the *vyākaraṇa paribhāṣās* of Pāṇinian Grammar. Consequently, it has become a prerequisite for him who wants to be well versed in the Pāṇinian system of grammar.

Definition of a metarule and its importance

Traditionally, an interpretive rule is known as *paribhāṣā* (metarule). The function of a metarule is to provide a check on the operational rules, so that they do not suffer from faults such as *ativyāpti* 'over-pervasion,' *avyāpti* 'under-pervasion' and *asambhava* 'operational impossibility,' that is, metarules assist operational rules in identifying precisely, their domain of application. Pāṇini has enunciated about seventy-five such metarules in different parts of the *Aṣṭādhyāyī*, while the tradition recognizes more than one hundred and thirty-four (the *Vijayā-ṭīkā*) additional metarules.

The word *paribhāṣā* is defined in various ways by grammarians in accordance with the characteristic properties possessed by a *paribhāṣā*. The word *paribhāṣā* does not occur in the *Aṣṭādhyāyī* of Pāṇini. The *Vārttikakāra* has used the term *paribhāṣā* in *vārt.* 4 on the *sūtra 'aṇudit savarṇasya cāpratyayaḥ'* P. 1. 1. 69, and in *vārt.* 3 on the *sūtra 'svaritenādhikāraḥ'* P. 1. 3. 11.[6] Hence, according to him, both the *sūtras* mentioned here are the *paribhāṣāsūtras*. Other *sūtras* which possess the similar characteristics may be designated *paribhāṣās*. Although Patañjali has not defined the term *paribhāṣā*, he has explained the term as a rule of interpretation which prescribes nothing independently, but which being connected with injunctive or other rules, becomes helpful in their operational aspect. A *paribhāṣā* enunciated at a particular place illuminates the whole *śāstra* and presents itself to remove an ambiguity encountered in the proper application of the rule.[7]

The word *paribhāṣā* is strictly used as a technical term in the *vyākaraṇa*. Nāgeśa also has not defined the term. The word *paribhāṣā* is derived from the root *bhāṣ* with the prefix *pari* by all grammarians and commentators. According to this derivation, the word would mean 'an actual statement which surveys all around' Vaidyanātha Pāyaguṇḍe has, accordingly, defined as follows: *parito vyāpṛtāṁ bhāṣāṁ paribhāṣāṁ pracakṣate.*[8] Many of the

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6. The *vārttika* is as follows — *varṇapāṭha upadeśa iti ced avarakālatvāt paribhāṣāyā anupadeśaḥ*. Mbh. P. 1. 1. 69, vtk 4. It refers to the *sūtra - aṇudit savarṇasya cāpratyayaḥ*. P. 1. 1. 69, as a *paribhāṣāsūtra*. Similarly the *Vārttika- anyanirdeśas tu nivartakas tasmāt paribhāṣā* Mbh. P. 1. 3. 11, vtk 3 refers to *svaritenādhikāraḥ* P. 1. 3. 11, as a *Paribhāṣāsūtra*.

7. *Paribhāṣā punar ekadeśasthā satī kṛtsnaṁ śāstram abhijvalayati pradīpavat.* — Mbh. on *'samarthaḥ padavidhiḥ'* P. 2. 1. 1.

8. *Paribhāṣenduśekhara, Gadā-ṭīkā*, page-2.

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commentators have followed this definition. Jayadeva Miśra has given its definition couched in the language of Navya-Nyāya : *lakṣyadharmikasādhutvaprakārakā-prāmāṇyajñānānāskanditabodhopayogibodhajanakatvaṁ paribhāṣātvam.*[9] It means the statements which give the authentic knowledge of the correct form of words. There is a simple definition of *paribhāṣā*: *aniyame niyamakāriṇī paribhāṣā* which means that a *paribhāṣā* restores order where disorder reigns.

A metarule in the *Vyākaraṇaśāstra* serves a three-fold purpose: (i) It helps in the interpretation of the rules of Pāṇini. (ii) It decides upon the priority of the application of such rules as come in conflict with each other even after the rule *vipratiṣedhe paraṁ kāryam*[10] has been taken into consideration. This is achieved by virtue of the *paribhāṣā pūrvaparanityāntaraṅgāpavādānām uttarottaraṁ balīyaḥ*[11] (iii) These metarules modify the sense of Pāṇini's rules in such a way so as to easily arrive at correct forms of words.

After commenting on the significance of the metarules we will now discuss briefly the place of metarules in Sanskrit Grammar. The *paribhāṣā 'vyākhyānato viśeṣapratipattir na hi saṁdehād alakṣaṇam,'*[12] which is given as the first metarule by Puruṣottamadeva, Śīradeva, Nīlakaṇṭha and Nāgeśa, emphatically states that every rule of grammar must be clearly interpreted in order to comprehend its correct sense lest it should be discarded because of doubt. The statement that a rule is not worth the name because it is doubtful betrays the lack of knowledge of the person who makes such a statement. Patañjali has utilized this metarule more than half a dozen times and has suggested that the interpretations of the ancient grammarians help in removing the doubts regarding Pāṇini's rules enjoining different grammatical operations to obtain the target usage. These interpretations may be termed *paribhāṣās* (metarules) in *vyākaraṇa*. For instance, Patañjali has quoted this metarule to explain the use of an indicatory phoneme (*anubandha*) *ṇ* at the end of the *Śivasūtras a i u ṇ* and *l*(*a*) *ṇ*; there arises a doubt whether the *pratyāhāras aṇ* and *iṇ*, when they are employed in Pāṇini's grammar, are formed with the *ṇ* of the former or with the *ṇ* of the latter *Sūtra*. One might on that account consider it difficult to ascertain what Pāṇini intends to convey by *aṇ* and *iṇ*, when he employs these terms in the *Sūtras*. So, according to the *Bhāṣyakāra*, the interpretation of the learned is the only way out to remove the ambiguity in such circumstances. In this context, the interpretation of the learned clarifies that it is the indicatory phoneme *ṇ* of

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9. *Paribhāṣenduśekhara, Vijayā-ṭīkā*, page-5.

10. P. 1. 4. 2.

11. *Paribhāṣenduśekhara ,Vijayā-ṭīkā, Paribhāṣā* No.-39.

12. *Ibid*, No.-01.

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l(a)ṇ by which the *aṇ-pratyāhāra* in *aṇudit savarṇasya* P. 1. 1. 69 is formed and at all other places it is formed with the *ṇ* of *a i u ṇ*. And secondly, the *iṇ-pratyāhāra* is formed the indicatory phoneme *ṇ* of *l(a)ṇ* in all the *Sūtras* where it occurs.[13]

Pāṇini formulated his rules with utmost brevity and algebraic condensation. This brevity, however, was not to be achieved at the expense of clarity. Thus Pāṇini needed a mechanism whereby *Sūtras* could be clearly understood. He chose the technique of context-sharing (*ekavākyatā*). Patañjali is correct when he says that two rules do not become different simply because they happen to be placed in different places in the grammar of Pāṇini; they may share a single context, even occurring at different places.[14] In the light of Patañjali's statement about the context-sharing technique of the Pāṇinian grammar, two significant metarules have been used in the system of Pāṇini to interpret clearly the *Sūtras* and to make the application unambiguous. The first one is *yathoddeśaṁ saṁjñāparibhāṣam* (*pari.* 2) and the second is *kāryakālaṁ saṁjñāparibhāṣam* (*pari.* 3). These two metarules lay down two standard methods in which the *saṁjñā* and the *paribhāṣā* rules of Pāṇini are to be interpreted along with those rules with which they are connected. These two methods of interpretation are called the *yathoddeśapakṣa* and the *kāryakālapakṣa*, in the Pāṇinian School of grammar. Patañjali and the later grammarians have chosen either of the two methods mentioned above to enable themselves to arrive at the correct form of the words they want to explain. The relevant explanation of a *saṁjñā* or a *paribhāṣā* rule and a rule which needs it, could be given in a *vākyaikavākyatā* or in a *padaikavākyatā*.

The first three metarules of the *Paribhāṣenduśekhara* (the *Vijayā-ṭīkā*) are important to deal with the nature of metarules and to discuss the association of Pāṇini's *saṁjñā* and *paribhāṣā* rules with those rules, the meaning of which is sought to be clearly brought out. Various aspects of grammatical procedure to explicate the derivational details of usages current among the cultured are addressed by the metarules in the following manner: 1. Metarules (4-8) are very useful to discuss the nature of indicatory phonemes (*anubandhas*), 2. Metarules (9-11) are useful to determine the nature of the word which is to undergo a grammatical operation (*kāryin*), 3. (12, 13) metarules are useful to discuss the nature of substitutes (*ādeśas*), 4. (14-17) *paribhāṣās* discuss the association of the sense element

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13. *ayaṁ ṇakāro dvir anubadhyate pūrvaś caiva paraś ca. ..... kiṁ punar varṇotsattāvivāyaṁ ṇakāro dvir anubadhyate. etaj jñāpayatyācāryo bhavatyeṣā paribhāṣā vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam ityanudit savarṇam parihāya pūrveṇāṇgrahaṇam pareṇeṇgrahaṇam iti vyākhyāsyāmaḥ*

- Mbh. on *Śivasūtra* 6, 'l(a) ṇ.'

14. *na videśastham iti kṛtvāto nānāvākyaṁ bhavati. videśastham api sad ekaṁ vākyaṁ bhavati*

- Mbh. 3. 4. 67, vtk 5.

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with words undergoing grammatical operations, 5. (18, 19) metarules discuss the validity of a word or words in the subsequent rules by their continuation (*anuvṛtti*), 6. Metarules (20, 21) discuss the nature of cognate letters (*savarṇa*), 7. Metarule (22) discusses the validity of a word which is elided (*pratyayalakṣaṇa*), 8. Metarule (23) discusses the problem of the derivation of words, 9. Metarules (24-30) discuss the nature of the *tadantavidhi*, 10. Metarules (31, 32) discuss the nature of the *vyapadeśivadbhāva*, 11. Metarules (33-38) discuss the nature of some specific rules, 12. Metarules (39-71) are very important to determine the priority of application in case of such rules as come in conflict during the process of formation of words, and 13. The remaining metarules (72-134) of the *Paribhāṣenduśekhara* are of manifold nature, which are mostly useful for the formation of words which are difficult to be formed without their application. Thus on the whole, the metarules are very useful to interpret the rules of Sanskrit grammar clearly and, in a way, make the rules fit for their application in derivational process of correct words.

Division of metarules

Pāṇini has enunciated about seventy-five metarules in the *Aṣṭādhyāyī*, while the tradition recognizes one hundred and thirty-four (the *Vijayā-ṭīkā*) additional metarules. The compilers of *paribhāṣās* have classified them into different categories so that they may be properly studied and applied. Puruṣottamadeva has divided these metarules into two categories *liṅgavatī* and *vidhyaṅgaśeṣabhūtā* in his *Lalitāvṛtti*.[15] There categories are also mentioned in the *Kātantraparibhāṣāsūtravṛtti*.[16] Śrī Dineśa Candra Bhaṭṭācārya, the commentator of Puruṣottamadeva's *Paribhāṣāvṛtti*, has followed suit and also divided these metarules into the above mentioned categories.[17] Some grammarians have divided these metarules into

15. *atheyaṁ paribhāṣā liṅgavatī vidhyaṅgaśeṣabhūtā vā. tatra na liṅgavatī. iko guṇavṛddhī itivat liṅganirdeśāt. vidhyaṅgānāṁ vidhisūtrāṇāṁ śeṣabhūtā ekadeśatvaṁ prāptā tviyaṁ. tathāhi 'śe'* (P. 1. 1. 13) *ityanenānayā saṁhatyārthavataḥ 'śe' śabdasya grahaṇena pragṛhyasaṁjñā vidhīyate. evam anyatrāpi paribhāṣāṇāṁ vidhyaṅgabhāvaḥ unneyaḥ*

- *Lalitāvṛttiḥ*, on *paribhāṣā* '*arthavadgrahaṇe…..*,'

16. *tāḥ dvividhāḥ. liṅgavatyo vidhyaṅgaśeṣabhūtāś ceti. tatra liṅgaṁ vidyate yāsāṁ tāḥ liṅgavatyaḥ. tāś caikatra deśe gṛhītasambandhāḥ satyo liṅgāpekṣayā pradīpavat sarvaṁ śāstram abhijvalayantīti. yathā- āgama udanubandhaḥ svarādantyātparaḥ* (P. 2. 1. 6), *yugapadvacane paraḥ puruṣāṇām* (P. 3. 1. 4) *ityādayaḥ. vidhyaṅgaśeṣabhūtā ucyante. niyamadvāreṇa vidhisūtraiḥ saha ekavākyatāmāpadyamānā lāghavoktayo vidhyaṅgaśeṣabhūtāstāḥ. pratisūtram upatiṣṭhanti. yathā- pratyayaḥ paraḥ* (P. 3. 2. 1), *kartari kṛt* (P. 4. 6. 46) *ityādayaḥ*

- *Kātantraparibhāṣāsūtravṛtti* .

17. *saiva dvividhā- liṅgavatī vidhyaṅgaśeṣabhūtā ca. yac ca śabda eva liṅgaṁ upādīyate sā liṅgavatī paribhāṣā. yathā 'iko guṇavṛddhī'* (P. 1. 1. 3). *yatra yatra guṇavṛddhī śrūyate tatra tatrekparibhāṣopatiṣṭhate. vidhivākyaikadeśabhūtā vidhyaṅgaśeṣabhūtā. yathā- 'vipratiṣedhe paraṁ kāryam'* (P. 1. 4. 2) *iti. yatra dvau prasaṅgāvanyārthāvekasmin viṣaye yugapat prāpnutaḥ sa tulyabalavirodho vipratiṣedhaḥ. tatra paraṁ kāryam bhavati*

- *Lalitāvṛtti-ṭīkā* , on metarule '*arthavadgrahaṇe nānarthakasya.*'

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the following categories: *avyāpti nivāraka* and *ativyāpti nivāraka* to provide a check on the operational rules, so that they do not suffer from the faults such as 'under-pervasion' and 'over-pervasion;' and others have divided them into *nitya* and *anitya*.

Some of the later grammarians have classified the metarules into three categories based on the nature of their formation: (a) *vācanikī* 'explicitly enunciated in the *Aṣṭādhyāyī*,' (b) *jñāpakasiddhā* 'those which are arrived at from the implication of Pāṇini's rules,' (c) *nyāyasiddhā* 'those which are axiomatic and are based on the norms or standards of day-to-day life.'

It is too difficult to classify the metarules on the basis of their functions in grammar, but almost all the commentators of the *Paribhāṣenduśekhara* have divided the subject matter of the metarules into three categories and accordingly, divided the *Paribhāṣenduśekhara* into three sections.[18] The first section consists of those metarules which help in the interpretation of the rules and in a way make the rules perform grammatical function in a proper way. It is, therefore, called *śāstratvasampādakaprakaraṇa*.[19] The second section consists of those metarules which determine the priority of application in the case of such rules as come in

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18. (a) *śāstratvasampādakaṁ prathamaṁ prakaraṇam, bādhabījakathanaṁ dvitīyam, śeṣārthakathanañ ca tṛtīyam*

- Pari. śe., *sarvamaṅgalā-vyākhyā, upodghātaḥ.*

(b) *athātra śāstrasampattimantarā bādhacintāyā asambhavāt śāstratvasampādanodde- śanāmakaṁ prathamam, śāstratvasampattau ca bādhacintāyā ucitatvāt bādhabījanāmakaṁ dvitīyam, pūrvoktaprakaraṇadvayāvaśiṣṭānām arthānāṁ bodhakatvād evānte nirūpaṇārhaṁ śāstraśeṣanāmakaṁ tṛtīyaṁ prakaraṇam*

- Pari. śe., *Bhūti-ṭīkā*, p.- 4.

(c) *asmin granthe trīṇi prakaraṇāni santi- śāstratvasampādakam, bādhabījakathanam, śeṣārthakathanañ ca. ekadeśavikṛtam ananyavad ityantamādyam. etad anantaram ubhayanirdeśe pañcamīnirdeśo balīyān ityantaṁ dvitīyam. tad anantaraṁ tṛtīyam*

- Pari. śe., *Vijayā-ṭīkā*, p.- 6.

(d) *trīṇi prakaraṇāni santi- śāstratvasampādakaṁ prathamam, bādhabījakathanaṁ dvitīyam, śeṣārthakathanaṁ tṛtīyam*

- Pari. śe., *Hemavatī-vyākhyā, upodghātaḥ.*

19. *atra prātaḥ smartavyāḥ śrībālaśāstriṇaḥ, tatra tatra padam arthaṁ vā paripūrya sandehaṁ vā nirākṛtya kutracit kaścid dharmaṁ vā 'ropya śāstrasya pāramārthikabodhajanakatvaṁ sampādayantībhiḥ paribhāṣābhir ullasitaṁ bhavatīti lakṣaṇa(śāstra)tvasampādanoddeśanāmavyavahāryatvam arhati prathamam*

- Pari. śe., *Bṛhacchāstrārthakalā-ṭīkā, ṭippaṇī saṅkhyā* - 1, p.- 23.

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mutual conflict during the derivational process of words. This section is called *bādhabījakathanaprakaraṇa*.[20] The remaining metarules in Nāgeśa's work are of manifold nature. These rules are mostly useful for the formation of difficult words and in view of their miscellaneous nature, have been entitled as *śeṣārthakathanaprakaraṇa*.[21]

Thus the metarules of Sanskrit grammar are divided into different categories by their authors and commentators, according to their utility in arriving at the clear explanation of the grammatical rules to derive the target words. Hence, the general dicta such as *jñāpakasiddhaṁ na sarvatra, jñāpakajñāpitā vidhayo hyanityā*, *agatyā nu paribhāṣāśrīyate* and so on, have been laid down by grammarians. It appears to be a logical corollary that several metarules are declared *anitya* or optional in their application.

Meaning of Śāstra in this context

The internal evidence and the number of the commentaries of Nāgeśa's *Paribhāṣenduśekhara* demonstrate the outstanding merit of the author. Almost all the commentators have classified the subject matter of the *Paribhāṣenduśekhara* into three sections. Among the three sections *śāstratvasampādakaprakaraṇa* is the first, which has thirty-eight metarules. In this context, it is meaningful to discuss the nature of *'śāstra'*.

Patañjali in his *Mahābhāṣya* explicitly refers Pāṇini's work as a *sādhvanuśāsana -śāstra* [Mbh. P. 1. 1. 1, vtk 8: *....sādhvanuśāsane'smiñ śāstre*]. *Śāstra* is a derivate formed from the verb *śās* 'to instruct', from which *anuśāsana* is also derived, with the *uṇādi* suffix *ṣṭran* (*Uṇādi Sūtra* IV.158- *sarvadhātubhyaḥ ṣṭran*). Pāṇini's work is, thus, a means of teaching (*anuśāsana*) correct speech form. So, grammar is a *Śāstra*. However, a *Śāstra* can be used with reference to an act of teaching, as for example, when the *Bhagavadgītā* uses *guhyatamaṁ śāstram* 'the most secret teaching' with reference to what Kṛṣṇa teaches. [*Gītā*, 15.20 - *iti guhyatamaṁ śāstram idam uktaṁ mayānagha*.] More specifically, the term *Śāstra* is used in the sense of a number of consecrated teachings, including grammar. For example, Mahādeva, in his *Uṇādikośa* on *Uṇādi Sūtra* IV.158, says *Śāstra* refers to the revealed lore (*śruti*) - that is, the

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20. *dvitīye ca viruddhānāṁ śāstrāṇāṁ bādhyabādhakabhāve bījānām upanyāsāt tad bādhabījanirūpaṇakhyāṁ arhati*

- Pari. śe., *Bṛhacchāstrārthakalā-ṭīkā, ṭippaṇī saṅkhyā* - 1, p.- 23.

21. *tṛtīye prakaraṇadvayaśeṣabhūtānāṁ paribhāṣāṇām upanyāsāt prābhimatānāṁ 'saṁjñāpūrvaka' ityādinām ca paribhāṣāṇāṁ khaṇḍanāt tacchāstraśeṣapadavīm arhati yathā sāṅkhyaiḥ sāṅkhyasūtraṣaṣṭhādhyāyaḥ śāstraśeṣākhyayā vyavahriyate tatra pūrvaṁ siddhāntitārthaśeṣopanyāsat nāstikādimatanirākṛteḥ*

- Pari. śe., *Bṛhacchāstrārthakalā-ṭīkā, ṭippaṇī saṅkhyā* - 1, p.- 23.

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Veda, to man-made lore (*smṛti*), to the Purāṇas, and to the six philosophical systems of *Nyāya, Sāṅkhya*, etc.[22] Grammar is traditionally reckoned among the *Smṛti*, as the one which teaches correct speech.[23] In addition, an individual *sutra* of the *Aṣṭādhyāyī* is called a *Śāstra*. As Nāgeśa in his *Uddyota* rightly notes that Patañjali speaks of a multitude of *Śāstra* because each single *sūtra* is a *Śāstra*. (*Mbh*. ud. on P. 1. 1. 1 vtk 8: *ekaikaṁ sūtraṁ śāstram iti śāstraughasyetyuktam*).

Thus, traditionally, as a *Śāstra* stands for Sanskrit grammar so do the words *'Śabdānuśāsana,*[24] *Vyākaraṇa,*[25] *Sūtra,*[26] *Yoga*[27] and *Lakṣaṇa,'*[28] having the same meaning which refers to the grammar and used widely by the grammarians in their own grammatical works.

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22. *śrutismṛtipurāṇeṣu śāstraṁ nyāyādiṣatsvapi. Uṇādikośa*, verse-653.

23. *sādhutvajñānaviṣayā seyaṁ vyākaraṇasmṛtiḥ. Vākyapadīya*, 1. 158.

24. (a) *Padamañjarī, I. 5 : viviktāḥ sādhavaḥ śabdāḥ prakṛtyādivibhāgato jñāpyante yena tac chāstramatra śabdānuśāsanam. Śabdakaustubha, I. 3 : .....anuśiṣyante vivicya asādhubhyo vibhajya bodhyante yeneti karaṇe lyuṭ. Udyota, I. 3 : anuśiṣyante'sādhuśabdebhyo vivicya jñāpyante'neneti.*

(b) *anuśāsanaṁ prakṛtipratyayādivibhāgena vyutpādanaṁ tadvyākaraṇena sākṣātkriyate iti sākṣātprayojanam. Uddyotana*, I. 7.

25. (a) Mbh. on P. 1. 2. 32 : *vyākaraṇaṁ nāmeyam uttarā vidyā. so'sau chandaḥśāstreṣvabhivinīta upalabdhyādhigantum utsahate.* Nāgeśa on *Udyota*, P. 1. 2. 32 : *chandaḥśāstreṣu. prātiśākhyaśikṣādiṣu.*

(b) In the *Muṇḍakopaniṣad*, grammar along with the other five *vedāṅgas* and the four Vedas are grouped together as making up knowledge (*vidyā*) which is not supreme (*aparā*), as opposed to the ultimate knowledge (*parā vidyā*), whereby the imperishable ultimate being is attained. '..... *dve vidye veditavye iti ha sma yad brahmavido vadanti parā caivāparā ca. tatrāparā ṛgvedo yajurvedaḥ sāmavedo'tharvavedaḥ śikṣā kalpo vyākaraṇaṁ niruktaṁ chando jyotiṣam iti. atha parā yayā tad akṣaram adhigamyate'*

- *Muṇḍakopaniṣad, muṇḍaka*-1, *khaṇḍa*-1, *mantra*-4-5.

26. *Sūtra* has few syllables (*alpākṣaram*), without inserted meaningless terms (astobham), and contains what is essential (*sāravat*), yet applies with reference to the most instances possible (*viśvatomukham*), and is not subject to doubt (*asandigdham*); it is without fault (*anavadyam*) -

alpākṣaram asandigdhaṁ sāravad viśvatomukham.
astobham anavadyaṁ ca sūtraṁ sūtravido viduḥ.

27. Patañjali speaks of a *Yoga*, found in the grammar- *'bhave ca taddhitaḥ', bhave ca taddhito nopapadyate- 'vyākaraṇe bhavo yogo vaiyākaraṇaḥ' iti. na hi śabde bhavo yogaḥ. kva tarhi? sūtre.*
- Mbh. I, paspaśā., vtk17.

28. (a) *lakṣyalakṣaṇe vyākaraṇam, lakṣyam ca lakṣaṇam caitat samuditaṁ vyākaraṇaṁ bhavati.*
- M.Bh. on P. 1. 1. 1vtk19.

(b) Hariballabha says — *'lakṣyte'nvākhyāyate sādhuśabdo'neneti lakṣaṇaṁ sūtram.'*
-Vaiyākaraṇabhūṣaṇasāra (kārikā, 10), *Darpaṇa-ṭīkā.*

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Metarules based on Śāstra; and how it serves to save the Śāstratva of Sanskrit Grammar?

Nāgeśa Bhaṭṭa, the author of the *Paribhāṣenduśekhara*, has presented the metarules as a single unit but the commentators of the *Paribhāṣenduśekhara* have divided the metarules into three categories, and accordingly the treatise has been categorized into three sections. The first section is *śāstratvasampādakaprakaraṇa*, which consists of thirty-eight metarules, starting with the *paribhāṣā* '*vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam*' up to '*ekadeśavikṛtam ananyavat.*' These metarules aid in interpreting the Pāṇinian rules so that they may be effectively applied in obtaining the correct word-forms.

The title of the first section *śāstratvasampādakaprakaraṇa* needs an explanation. The word '*Śāstra*' is synonymous with *vyākaraṇa*. It means teaching of the speech forms that are unambiguous. The commentators of the *Paribhāṣenduśekhara* say that the state of being a treatise consists in making known the words which are free from inauthenticity[29] or, which possess the capability of being used by the cultured.[30] According to this definition, *Śāstras* are statements, by means of which we arrive at the correct forms of words, and by means of which one can say that *idam lakṣyaṁ sādhu*. The correct forms of words are the '*lakṣya*' and the corpus of the rules is the '*lakṣaṇa*'. [M. Bh. 1.1.1 vtk19- *śabdo lakṣyaḥ, sūtraṁ lakṣaṇam*]. As for example, *iko yaṇ aci* (P. 6. 1. 77) is a *Śāstra*. The state of being a *Śāstra* (*Śāstratva*) in this rule does not come by itself, but with the help of the *paribhāṣāsūtra 'tasminniti nirdiṣṭe pūrvasya'* (P. 1. 1. 66). The rule *iko yaṇ aci* says that 'the condition of maximum proximity between two phonemes being available, let *yaṇ* be substituted in place of *ik*, when the latter is followed by *ac* (a vowel)' (*ikaḥ sthāne yaṇ syād aci saṁhitāyāṁ viṣaye*) and the rule *'tasminniti nirdiṣṭe pūrvasya'* says that 'when a term is stated in the seventh case, let the grammatical operation directed by it be performed on that which precedes the term without being separated even by a single phoneme' (*saptamīnirdeśena vidhīyamānaṁ kāryaṁ varṇāntareṇā'vyavahitasya pūrvasya bodhyam*). Now, taking *sudhyupāsyaḥ* as an illustration, we will discuss about the application of these rules. It is a case of a coalescence of vowels. There are two words *sudhī* + *upāsya* (*sudhībhiḥ upāsyaḥ, tṛtīyā tatpuruṣa*) which are compounded according to the rule *kartṛkaraṇe kṛtā bahulam* (P. 2. 1. 32). There is an obligatory *sandhi* in a compound as is clear from the following verse: "*saṁhitaikapade nityā, nityā dhātūpasargayoḥ, nityā samāse vākye tu, sā vivakṣām apekṣate.*" Hence the rule *'iko yaṇ aci'* prescribes the coalescence of the vowels denoted by *ik* (*i u ṛ ḷ*) and those followed by *ac* will be replaced by *yaṇ* (*y v r l*). This means that when *ac* follows, *ik* will be substituted

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29. *aprāmāṇyajñānānāskanditabodhajanakatvameva śāstrāṇāṁ śāstratvam*
-Pari. śe., *Hemavatī-vyākhyā, Upodghātaḥ.*

30. *lakṣyadharmikasādhutvaprakārakāprāmāṇyajñānānāskanditabodhajanakatvaṁ śāstratvam*
-Pari. śe., *Subodhinī Hindī-vyākhyā*; p. — 3

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by *yaṇ*. But there is no specification of which *ik* will be substituted by *yaṇ* when *ac* follows. In the given illustration the phoneme *u* of *upāsya* may become the condition for the replacement of either *u* or *ī* of *sudhī* by *yaṇ* and thus the process of derivation would be rendered ambiguous. Then the rule *tasminniti nirdiṣṭe pūrvasya* comes into play to remove the undesirable contingency of the rule *iko yaṇ aci* and says that the term exhibited in the locative case will direct the operation to that which immediately precedes. So, in this example, it is *'u'*, a denotatum of *ac* of *upāsya* which directs that in this operation the *ī* of *sudhī* is the immediately preceding (*avyavahitapūrva*) *ik* which will be substituted by *y*(*a*) of the *pratyāhāra yaṇ*, and in this way, we get the correct compound word *sudhī + upāsya →sudhyupāsyaḥ*. Thus it becomes clear that the state of being a *Śāstra* of the *Śāstra 'iko yaṇ aci'* is saved by the *paribhāṣāsūtra 'tasminniti nirdiṣṭe pūrvasya.'* The illustration of *yaṇ-sandhi* given here is a stock example which is quoted by the commentators to illustrate the grammatical function enjoined by this *paribhāṣāsūtra*.

The metarules, which are compiled in the *Paribhāṣenduśekhara*, are not stated explicitly in the *Aṣṭādhyāyī* but are based on the implication of the rules enunciated by Pāṇini and are also assumed by the tradition. Let us now take up a metarule from the *Paribhāṣenduśekhara* to discuss how a metarule protects the state of being a *Śāstra* of *'Śāstra'*(*sūtra*): *sanādyantā dhātavaḥ* (P. 3. 1. 32) is a *Śāstra*, but the *Śāstratva* comes in this rule by virtue of the metarule *pratyayagrahaṇe yasmāt sa vihitas tadādes tadantasya grahaṇam*.[31] It says 'an affix denotes, whenever it is employed in grammar, a word form which begins with that to which that affix has been added and which ends with the affix itself'. The significance of this metarule is exemplified by the sentence *Devadattaścikīrṣati*. If this metarule was not there, then the *dhātu*-designation would apply to the word Devadatta. In this combination of letters, this begins with *Devadatta* and ends with the affix *san*, so by the rule *sanādyantā dhātavaḥ* Devadatta becomes *dhātusaṁjñaka* (i.e., verbal root). Being a verbal root, there will be elision (*luk*) of the case-affix *sup* by the rule *supo dhātuprātipadikayoḥ* (P. 2. 4. 71). In this way, an incorrect word form would become contingent, which is undesirable. Now, the metarule *pratyayagrahaṇe yasmāt sa vihitas tadādes tadantasya grahaṇam* comes into to play to do away this undesirable contingency. According to this metarule, the affix *san* in the rule *sanādyantā dhātavaḥ* denotes only *cikīrṣa*, since the affix *san* has been introduced after the verbal root *kṛ*. The derivative base *cikīrṣa* begins with *kṛ* and ends with *san*. Consequently, *cikīrṣa* is to be called a root by the rule *sanādyantā dhātavaḥ* and not Devadatta. Thus we get the correct form of expression *Devadattaścikīrṣati*. So, the *Śāstratva* of the *Śāstra 'sanādyantā dhātavaḥ'* is saved by the *pratyayagrahaṇe*...etc. *paribhāṣā*.

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31. Pari. śe., *Vijayā-ṭīkā*. No- 24.

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Thus all the thirty-eight metarules of the first section of the *Paribhāṣenduśekhara* are helpful in removing the ambiguity of the Pāṇinian rules and in interpreting the rules correctly, so that we can obtain correct forms of usages. That is why, it is called *śāstratvasampādakaprakaraṇa.*

Some more examples

Let us now discuss a few more metarules from *śāstratvasampādakaprakaraṇa* of the *Paribhāṣenduśekhara* of Nāgeśa Bhaṭṭa to clarify the notion referred to above.

(a) ***vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam***[32]

The metarule *vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam* has been discussed in the *Mahābhāṣya* on the *Māheśvarasūtra l(a)ṇ*; so, it can be designated as a *vācanikī paribhāṣā* (i.e., the metarule which is explicitly stated by Patañjali in the *Mahābhāṣya*).

The phoneme *ṇ* is made use of as an *anubandha* both in the first *sūtra 'a i u ṇ'* and the sixth *sūtra 'l(a)ṇ'* of the *Māheśvarasūtras*. There arises consequently, a doubt whether the *pratyāhāras aṇ* and *iṇ*, when they are employed in Pāṇini's grammar, are formed with the *ṇ* of the former or with the *ṇ* of the latter *sūtra*. One might, on that account, consider it impossible to ascertain what Pāṇini intends to denote by *aṇ* and *iṇ*, when he employs these terms in the *Aṣṭādhyāyī*. So, the author of the *Mahābhāṣya* says: *vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam* 'the precise meaning of an ambiguous term is ascertained from interpretation, for a rule, even though it contains an ambiguous term.'

An ambiguous term may convey more meanings than one. It should not be left as it is considering it invalid. In such cases we should take into consideration the interpretation[33] given by the learned scholars, i.e., the author of the *vārttika*, the author of the *Mahābhāṣya* and the others, in this regard. This is what is meant by the *paribhāṣā 'vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam'* and it ought to be extended to the analytical understanding of Pāṇini's *Aṣṭādhyāyī* since whatever is enunciated in Pāṇini's grammar is purported to convey something significant from the point of view of the target usage of the

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32. Pari. śe., *Vijayā-ṭīkā*. No- 01.

33. The meaning of 'interpretation' by traditional instruction of such kind as is described in the verse –

padacchedaḥ padārthoktir vigraho vākyayojanā.
ākṣepo'tha samādhānaṁ vyākhyānaṁ ṣaḍ vidhaṁ matam.

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cultured. As Nāgeśa supplies this explanation of the metarule in his *Paribhāṣenduśekhara*[34] Vijayākāra Jayadeva Miśra, elaborating this idea, also says "*asandigdhānuṣṭhānasiddhyarthatvena śāstraṁ sandehād alakṣaṇam apravartakalakṣaṇaṁ bhavitun nārhati parantu tathā prāptam iti vyākhyānāt sandehanivṛttiḥ karttavyeti bodhyam.*"[35]

Accordingly we learn from the interpretation that the term *aṇ*, except in *aṇudit savarṇasya cā'pratyayaḥ* (P. 1. 1. 69), is formed with the consonant *ṇ* of the first *Māheśvarasūtra 'a i u ṇ'*, and that the term *iṇ* is formed with the phoneme *ṇ* of the subsequent *Māheśvarasūtra 'l(a)ṇ'*. As the Bhāṣyakāra says — "*ayaṁ ṇakāro dvir anubadhyate pūrvaś caiva paraś ca. ... ... kiṁ punar varṇotsattāvivāyaṁ ṇakāro dvir anubadhyate. etaj jñāpayatyācāryo bhavatyeṣā paribhāṣā vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam ityaṇudit savarṇaṁ parihāya pūrveṇāṅgrahaṇaṁ pareṇeṅgrahaṇam iti vyākhyāsyāmaḥ.*"[36]

Thus the metarule *vyākhyānato viśeṣapratipattir na hi sandehād alakṣaṇam* saves the state of being a *Śāstra* residing in the *Śāstras 'a i u ṇ'* and *'l(a)ṇ'*, and removes the ambiguity of the rules so that they may be effectively applied to get correct usages.

(b) ***yadāgamās tadguṇībhūtās tadgrahaṇena gṛhyante*** [37]

The metarule *yadāgamās tadguṇībhūtās tadgrahaṇena gṛhyante* is axiomatic and owe its importance to the norm or standard of the day-to-day life to explain and justify the correct interpretation of the Pāṇinian rules, so it is called a *nyāyasiddhā paribhāṣā*.

By the *sūtra dādhāghvadāp*,[38] the technical term *ghu* is assigned to the root *dā*. One might, therefore, say that it cannot apply to *dāpi*, which by the *sūtra 'artihrīḍlīrīknūyīkṣmāyyātāṁ puṅṇau'*[39] is derived from the verbal root *dā* by adding the augment *puk*. The word *dāpi* cannot be denoted by *dā* in *dādhāghvadāp* since the former differs in form from the latter and more so since the segment *dā* in *dāpi* does not bear any

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34. *viśeṣasyānyatarādyartharūpasya vyākhyānāccheṣṭakṛtāt pratipattir niścayaḥ. hi yataḥ sandehāccchāstram alakṣaṇam ananuṣṭhāpakaṁ lakṣaṇam alakṣaṇaṁ tathā na. śāstrasya nirṇayajanakatvaucityād ityarthaḥ. asandigdhānuṣṭhānasiddhyarthe'tra śāstre sandigdhoccāraṇarūpācāryyavyavahāreṇa sandehanivṛtter vyākhyānātiriktanimittān apekṣatvaṁ bodhyata iti* - *Paribhāṣenduśekhara*, on *Paribhāṣā* – 1.

35. *Pari. śe., Vijayā-ṭīkā, pari.*- 01, Page- 08.

36. Mbh. on 'l(a)ṇ' *sūtra*.

37. *Pari. śe., Vijayā-ṭīkā*. No- 12.

38. P. 1. 1. 20.

39. P. 7. 3. 36.

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meaning in accordance with the *paribhāṣā 'arthavadgrahaṇe nānarthakasya'*.[40] Consequently, the *sūtra 'ner gadanadapatapadaghumāsyatihantiyātivātidrātipsātivapativahatiśāmyaticinotidegdhiṣu ca*[41] which prescribes the cerebralization of the dental *n* of *ni* when prefixed to the roots termed *ghu*, cannot take effect when *ni* is prefixed to the causal *dāpi* of *dā* in the formation of *praṇidāpayati* etc. The metarule *yadāgamās tadguṇībhūtās tadgrahaṇena gṛhyante* offers a solution by stating that that to which an augment is added denotes whatever results from its combination with that augment, because the augment forms part of it.

The augment which is introduced to anything must be according to the rules of grammar *ādyantau ṭakitau,*[42] *midaco 'ntyātoaraḥ,*[43] etc., and it should be regarded as part of the latter. It, therefore, denotes both itself and the element to which it has been added. The portion of the *paribhāṣā* 'because the augment forms part of it' contains the reason why this is the case. So, in the formation of *praṇidāpayati*, the *sūtra- artihrīblī*..... etc. prescribes the insertion of *puk* at the end of *dā* in consonance with *ādyantau ṭakitau*. This augment *puk* becomes a part of the verbal stem *dā* by virtue of this *paribhāṣā* and thus we will take *dāpi* in the place of *dā* for the derivational process of the word we are going to form. Now, with the help of this metarule the derivative root *dāpi* can be designated as *ghu* by the rule *dādhāghvadāp*. As such, the rule *nergadanada*..... etc., substitutes the dental *n* of the prefix *ni* by the cerebral *ṇ*, since the occasioning factor for the cerebralization exists in the prefix *pra*. We observe, also in the common practice of life that whenever a person, say Devadatta possesses any limb in excess, the word Devadatta denotes the man Devadatta as possessed of that additional limb and does not denote Devadatta because of that extra limb. So, the augment *puk* becomes part of the verbal root *dā* and thus *dāpi* denotes the whole, to fulfill the purpose of the correct target usage.

Thus the metarule *yadāgamās tadguṇībhūtās tadgrahaṇena gṛhyante* helps in interpreting the *śāstra nergadanadapada*.....etc. and removes the ambiguity about the substitute *ṇ* in place of *n* when followed by *dāpi* instead of *dā* so that the required formation of the word *praṇidāpayati* may be obtained.

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40. Pari. śe., *Vijayā-ṭīkā*. No- 15.

41. P. 8. 4. 17.

42. P. 1. 1. 46.

43. P. 1. 1. 47.

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(c) ***saṁjñāvidhau pratyayagrahaṇe tadantagrahaṇaṁ nāsti*** [44]

The metarule *saṁjñāvidhau pratyayagrahaṇe tadantagrahaṇaṁ nāsti* has been discussed in the *Mahābhāṣya*[45] on the *sūtra 'suptiṅantaṁ padam'*[46] and justified on the basis of an implication derived from the rule of Pāṇini, so this is a *jñāpakasiddhā paribhāṣā* (i.e., that which Pāṇini must have implicitly assumed. Otherwise, the whole *sūtra* or a part of it would be rendered vacuous).

One can say that by accepting the metarule *pratyayagrahaṇe yasmāt sa vihitas tadādes tadantasya grahaṇam*,[47] the word-forms ending with *tarap* and *tamap* will also be denoted by the technical term *gha* as is prescribed by the *sūtra taraptamapau ghaḥ*.[48] Actually, only *tarap* and *tamap* suffixes are *gha-saṁjñaka*, not the word-forms ending with these suffixes. If we accept the word-forms ending with the suffixes *tarap* and *tamap*, then in the word-forms like *kumārīgauritarā, gauritarā* will be assigned the *gha*-designation, so the long *ī* of *kumārī* will be replaced with the short *i* by the *sūtra 'gharūpakalpaceladṛbruvagotra-matahateṣu ṅyo'nekāco hrasvaḥ.'*[49] The form *kumāri-gautitarā* would be incorrect. So, to remove this anomaly, the author of the *paribhāṣās* says - *saṁjñāvidhau pratyayagrahaṇe tadantagrahaṇaṁ nāsti*, i.e., an affix when employed in a rule which teaches the meaning of a technical term, does not denote a word-form ending with that affix.

The employment of the word *anta* in the *sūtra- 'suptiṅantaṁ padam'* indicates that Pāṇini has implicitly assumed the fact that an affix does not refer to an item which ends with it when it is used in a rule that defines a term. So, the word-form ending with the affixes *tarap* and *tamap* are not denoted by the rule *taraptamapau ghaḥ*. Therefore, in *kumārī-gauritarā, kumārī* will not be a word-form ending with *tarap*, so it is not the *gha-saṁjñaka* and by the *sūtra- gharūpakalpa*.....etc., the long *ī* will not be replaced by short *i*.

Thus the metarule *saṁjñāvidhau pratyayagrahaṇe tadantagrahaṇaṁ nāsti* saves the *Śāstratva* of the *Śāstra 'suptiṅantaṁ padam'* and removes the ambiguity about the term *anta*

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44. Pari. śe., *Vijayā-ṭīkā*. No- 28.

45. *suptiṅantaṁ padam. antagrahaṇaṁ kim artham? na suptiṅ padam ityevocyeta. kenedānīṁ tadantānāṁ bhaviṣyati. tadantavidhinā. ata uttaraṁ paṭhati. padasaṁjñāyāmanta grahaṇam anyatra saṁjñāvidhau pratyayagrahaṇe tadantavidhipratiṣedhārtham. padasaṁjñāyām antagrahaṇaṁ kriyate jñāpanārtham. kim jñāpyam. etaj jñāpayatyācāryo'nyatra saṁjñāvidhau pratyayagrahaṇe tadantavidhir na bhavatīti*

- Mbh. on P. 1. 4. 14.

46. P. 1. 4. 14.

47. *Pari. śe., Vijayā-ṭīkā*. No. 24.

48. P. 1. 1. 22

49. P. 6. 3. 43.

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in the *Śāstra* and points out what Pāṇini implicitly assumes by the use of the term *anta* in the *sūtra 'suptiṅantaṁ padam'*.

Conclusion

The Pāṇinian system of grammar that touched the peak of Indian tradition of knowledge is an elaborate description of Sanskrit language. About four thousand aphorisms of the *Aṣṭādhyāyī* were supplemented by Kātyāyana by an equal number of *vārttikas*. Patañjali provided a strong foundation by means of his elaborate annotations and *iṣṭis*. Pāṇini's grammar serves as a means towards understanding syntactic structures. This goal is accomplished by abstracting generalization from usage and formulating rules, which describe that usage authoritatively. The Pāṇinīyas, too, recognize that the Pāṇinian grammar is a means of explaining (*anvākhyāna*) the usage of the cultured (*śiṣṭa-prayoga*). In order to facilitate proper formulation, interpretation and application of the rules, Pāṇini follows a meta-theory to outline his conventions and in doing so he brilliantly supplies the concept of *saṁjñā* and *paribhāṣā* in the *Aṣṭādhyāyī*.

This paper aims at analysing the metarules based on the *Śāstra* with special reference to the *Paribhāṣenduśekhara* of Nāgeśa Bhaṭṭa and its commentaries. In the early eighteenth century, Nāgeśa wrote the *Paribhāṣenduśekhara,* a masterly work on the *paribhāṣās*. There are about one hundred and thirty four *paribhāṣās* in this treatise. This is a well-known work and a necessary prerequisite for the advanced students of Sanskrit *vyākaraṇa* in all the Oriental schools and colleges for a good command over the Pāṇinian system of grammar. Traditionally, the interpretive rules are known as *paribhāṣās* (metarules). The function of these rules is to provide a check on the operational rules, so that they do not suffer from faults such as over-pervasion (*ativyāpti*), under-pervasion (*avyāpti*) and operational impossibility (*asambhava*). That is, metarules assist the operational rules in precisely identifying their domain of application. The term *paribhāṣā* has been lucidly expounded by the commentators of the *Paribhāṣenduśekhara*. The metarules serve a three-fold purpose in the *vyākaraṇa śāstra*: (i) It helps the interpretation of the rules of Pāṇini (ii) it decides the priority of application of such rules as come in conflict with each other even after the rule *vipratiṣedhe paraṁ kāryam* has been taken into consideration. This is achieved by virtue of the metarule *pūrvaparanityāntaraṅgāpavādānām uttarottaraṁ balīyaḥ* (iii) these metarules modify the sense of Pāṇini's rules in such a way so as to easily arrive at the correct forms of words.

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These *paribhāṣās* have been divided into three categories : *Śāstratvasampādakaprakaraṇa, Bādhabījakathanaprakaraṇa* and *Śeṣārthakathanaprakaraṇa*. The section entitled *Śāstratvasampādakaprakaraṇa* is the first, where the term *'Śāstra'* stands for the Sanskrit grammar as well as an individual *sūtra* of the *Aṣṭādhyāyī*. So, all the thirty-eight metarules of the first section of the *Paribhāṣenduśekhara* are helpful in removing ambiguity of the Pāṇinian rules and help interpret the aphorisms so that they may be employed to get the correct derivational forms. That is why, it is called *Śāstratvasampādakaprakaraṇa*.

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THE SPIRITUAL PATH OF DEVOTION : THE *VĪRAŚAIVA* PERSPECTIVE

Dan A. Chekki*

I

The religion and philosophy of India, with a focus on the goal of God realization, suggests three main spiritual paths, namely the path of devotion (*bhakti*), the path of knowledge (*jñāna*), and the path of action (*karma*). Among these, the spiritual path of devotion involves passionate longing for the great Divine from one's whole heart and a passionate outburst of loving devotion towards a personal God. This emotional approach to God has a widespread appeal to a large majority of devotees. It is considered to be the most natural way to make our body, mind and heart directed towards God, and it implies commitment, loyalty, love and respect, reverence and worship oriented towards God.

The sacred scriptures of India, such as the Vedas, the Upaniṣads, the *Bhagavad Gītā, Bhāgavata Purāṇa* and numerous other Purāṇas, reflect the way of devotion marked by the worshipper's spontaneous and intense emotional feelings of an intimate relationship with the Divinity. The way of devotion denotes one's single-minded devotion, attachment and personal surrender to God. One's selfless love, without expectation of rewards is considered to be an ideal end in itself. The path of devotion - a matter of the heart - has exerted a profound influence on the followers of the *Vaiṣṇava* and *Śaiva* religious traditions.[1]

The devotional school and socio-religious protest movements, which encompass various religious and philosophical streams, have emerged in different regions spanning the subcontinent of India. One of the outstanding characteristics of the devotional movement is its mass appeal, which, through regional language, is aimed at raising spiritual consciousness and changing people's traditional beliefs and behaviour. Through their devotional lyrics, saint-poets such as Tulsīdāsa, Caitanya, Maṇikka-Vacakara, Mīrābāi, Tukārāma, Guru Nānaka

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1. Klostermaier K.K., "*A Survey of Hinduism*", 1994, pp. 221-237.

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and Kabīra - just to name a few - conveyed their loving devotion to God and their intense longing for God vision. Whereas the sacred scriptures in Sanskrit were confined to the minority of the priestly and elite class of learned scholars, the saint-poets, in simple regional language, disseminated the spiritual path of devotion directed towards God.

Although many seem to be familiar with the saint-poets from Northern India, and their devotional lyrics, the devotional reform movement initiated by the twelfth century *Vīraśaiva* saint-poets in Karṇāṭaka remains largely unknown, both in India and abroad. Here, an attempt is made to provide an overview of this *Vīraśaiva* reform movement which demonstrates a strong devotional and spiritual element.

II

The *Vīraśaiva* philosopher-poets and revolutionary mystics preached and practiced the values of monotheism-that is, Lord Śiva is the supreme primordial source of energy and the creator of the infinite Universe. Furthermore, the principles of equality of all humans, a strong work ethic (*kāyaka*), community service and sharing (*dāsoha*), compassion, nonviolence and peace, and social justice are all characteristics of this community of Śiva worshippers. Today, the followers of the *Vīraśaiva*, or *Liṅgāyata*, religious tradition[2] constitute more than fifteen million people who reside in Karṇāṭaka, Mahārāṣtra, Āndhra Pradeśa, Tāmila-Nāḍu and elsewhere in India, and also as significant minorities in North America, the U.K., Australia and New Zealand.

In order to better understand the spiritual path of devotion which was pursued by the *Vīraśaiva* philosopher-poets and mystics, it is necessary to have some acquaintance with the *Vīraśaiva* philosophy. The following presents the essence of the *Vīraśaiva* concept of God, its spiritual system and process.

Lord Śiva has neither form nor is he formless. He is the eternal, the changeless, and the imperishable, infinite in form, self-subsistent Void (*śūnya, bayalu*), the effulgent light of billions of Suns, incomprehensible and invisible, yet all-pervasive. Śiva is a blend of male and female principles, the source of primeval energy (*śaktī*), and the creator of the entire Universe. Śiva, though formless, manifests in the form of a spiritual mentor (*Guru*), as the symbol (*Iṣṭaliṅga*) or as an itinerant religious instructor (*Jaṅgama*).

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2. Chekki D. A., "*Religion and Social System of the Vīraśaiva Community*", 1997, pp. 3-24 ff.

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Lord Śiva (*Liṅga/Iṣṭaliṅga*) is the Universal soul and the devotee is the individual soul (*Aṅga*). The *Liṅga* is the soul of the devotee. The individual soul of the devotee is no different from the Supreme Soul or the Universal soul (*Śiva/Liṅga*). The *Vīraśaiva* philosophy is based upon the belief that the devotee (individual soul)-though a part of the Supreme Soul-initially remains wrapped with impurity and worldly attachments, is deluded by material and sensual experiences, and lives in ignorance of the Divine.

It is through self-realization-or through the Guru's grace-that the consciousness of, and aspiration for, the Divine dawns, and the spiritual desire of the devotee to unite with the Supreme Reality emerges. The Guru initiates the devotee into the *Vīraśaiva* code of conduct and the six-phase spiritual system (*Ṣaṭsthala*). This spiritual journey begins with the stage of being a devotee and eventually culminates in the devotee's union with Lord Śiva. The devotional element, however, remains a major component throughout the devotee's spiritual journey.

The spiritual stage of the devotee (*bhakta*) is characterized by the aspirant's intense devotion to Lord Śiva, adherence to the *Vīraśaiva* codes of conduct (*pañcācāra*), tranquility of mind, dedicated work (*kāyaka*), and community service (*dāsoha*). The devotee holds a firm belief in the supremacy of Śiva as the only God. This stage of devotion is expected to purify the soul by disciplining, or erasing, material desires and biological urges and passions. The sacred symbol (*Iṣṭaliṅga*), representing Lord Śiva, is the object of concentration, contemplation, meditation and worship for the devotee. The devotee works in the spirit of selfless service to humanity with no expectation of rewards, and accepts both pleasure and pain as God's grace. The devotee, by virtue of his sustained self-awareness in spiritual enlightenment, knows that he/she is a particle of the Divine.

When the individual soul of the devotee finally merges with Lord Śiva (the Universal of Supreme Soul), there is neither devotee nor God, neither worshipper nor worshipped. This state of union (*aikya*) is a blissful ecstatic experience of beatitude and peace. It is the stage beyond meditation, as there is none to meditate upon. There is no word, no sound, just absolute silence; the Void or Space that is limitless. This stage of union signifies the ultimate depersonalization of the individual soul, now free from the cycle of births and deaths. Though beyond description, the final stage of the union with Lord Śiva is compared to a process of milk mixing with milk, breeze absorbed by breeze, rivers merging into the sea, light merging with the effulgent light, space merging with the infinite space, and so forth.[3]

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3. Chekki D. A., "*The Philosophy and Ethics of Vīraśaiva*", 2003, pp. 3-61 ff.

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III

During the twelfth century in Karṇāṭaka, a band of philosopher-saint-poets attempted to build an egalitarian community composed of the devotees of Lord Śiva. This *Vīraśaiva* movement is generally associated with the devotional movement because of the intense devotional character of thousands of lyrics that were addressed to Lord Śiva by several *Vīraśaiva*-saint-poets. Saint Basava[4], a Brahmin by birth, spearheaded the *Vīraśaiva* movement and revolted against all forms of inequality and injustice. This social and religious reform movement was supported by a host of saint-poets such as Prabhu, Chennabasava, sister Mahādevī, Siddharāma, and many others who professed and practiced the principle of equality of all, irrespective of caste, class, gender and power. The *Vīraśaiva* saints emphasized the necessity of devotion to God and of being of service to fellow human beings. The *Vīraśaiva* philosophy stresses the importance of all the spiritual paths of knowledge, action and devotion for God-realization. Śiva knowledge without action, and action without knowledge, are not encouraged. However, the devotional element remains a major component of the devotee's spiritual journey. Let us now illustrate and illuminate the spiritual path of loving devotion to God that was pursued by some outstanding *Vīraśaiva* philosopher-poets.

The *Vīraśaiva* saint-poets, through their devotional lyrics (*vacanas*), expressed a profuse devotion to God. Saint Basava[5] was an embodiment of devotion-a supreme devotee par excellence. He was indeed a treasure house of devotion. Though he was aware of his shortcomings and often engaged in self-criticism, he strongly believed that Lord Śiva is pleased with nothing but true devotion-even more than music, scriptures, and elaborate rituals and worship. Basava addressed Lord Śiva as his father, mother, kith and kin, and appealed for God's grace and blessings. When he meditated and sang the glory and majesty of Lord Śiva, his joy and jubilance knew no bounds.

Basava revealed his initial anguish, divine discontent and pain of separation from the Lord. He believed that true devotion is very difficult to achieve. According to him, a true devotee should have purity of body, mind and heart, freedom from egoism, disinterest in material wealth, and the qualities of humility, hospitality, courtesy and virtue. A devotee should exude happiness and peace to his associates, and should also make no caste, gender or occupational distinctions among the devotees of Śiva.

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4. S. S. Wodeyar (ed.), Sri Basaveshwara, 1967, pp. 3-30 ff. Chekki D. A., "*The Structure and Content of the Vīraśaiva Purāṇas*", 2009, pp. 18-43.

5. Yagati V.C., (ed.). Gunjal S. R., *(Tr.)*, "*The Gospel of Basava*" 2007, pp. 2-321.

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Basava's devotion to God was incomparable. He earnestly appealed to God to free him from mundane desires, and he expected to be fed with the nectar of devotion. He wished to always be within the cage of devotion. Moreover, he was committed to the principles of equality, dedicated work, community service and sharing, truth, love and justice. He followed the path of loving devotion directed towards the goal of a union with God. Basava's intense love of devotion, and his deep faith, evolved and assumed a cosmic dimension. In the mystic path of Basava, the intimate relationship with God emerged in the form of service, friendship, filial affection and spiritual love as with a devoted spouse.

Besides being a spiritual aspirant, Basava was also involved in changing a traditional society which was based on inequality and injustice and socio-religious institutions. Furthermore, Basava served as a finance minister, and later as the chief minister, for a medieval political dynasty. In the midst of these opposing forces of the material and spiritual, Basava felt helpless and resorted to God for grace and blessings. He eventually experienced spiritual enlightenment as a devotee and realized God within himself. His spiritual journey culminated in the ultimate sublime union with Lord Śiva, and he experienced the spontaneous outflow of mystic ecstasy. Like a river merging into the sea, his devotion merged with Lord Śiva, culminating in the state of ultimate Silence, light mingled with the Supreme Light. According to the *Vīraśaiva* philosophy, at the final stage of the spiritual journey there is no difference, in reality, between Lord Śiva and a true devotee.

IV

A remarkable saint-poetess, sister Mahādevī's ardent love for, as well as devotion to, Lord Śiva stimulated her poetic genius[6] and aroused her to explore the mystical bond between the soul and God. Her life underwent a metamorphosis from a life of sense to a life of spirit. Mahādevī embraced a strong belief that her soul was already spiritually married to Lord Śiva. To her, Śiva is beyond time and eternity. He is greater than the Great. Śiva is everywhere-all powerful and incomprehensible to the scriptures, unintelligible to logic, beyond rites and rituals, and beyond thought, sound and imagination.

Mahādevī referred to Śiva as her best friend and companion. As she was spiritually married to Śiva, she addressed Lord Śiva as her lover, bridegroom and husband. She gazed ceaselessly at her Lord and became absorbed in the Supreme Reality as his lover, bride and

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6. Chekki D. A., *Bhavan's Journal*, Vol. 52 : 13-14, 2006, pp. 39-45, pp. 77-79.

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wife. Sister Mahādevī manifested the nature of her conjugal relationship of her love of God, which was essentially spiritual. She appealed to God to dispel her love of God, which was essentially spiritual. She appealed to God to dispel her sensual desires and to liberate her from worldly entanglements. She dedicated and surrendered her body, heart and soul to the Divine.

Sister Mahādevī's love for Lord Śiva knew no limits. She sang : 'I love him whether he loves me or not.....In love of Thee, I quite forget my hunger, thirst, and sleep." Furthermore, her intense devotion to Lord Śiva is expressed in another of her poems: "Though, O Lord, you may slay me, I will never cease to love the hand that slays !"

Mahādevī's longing for the divine vision and her pangs of separation from, and quest for, God are superbly articulated in many of her lyrics. She daydreamed and waxed, waned and withered in her fantasy of love for the Divine. She worshipped, prayed, meditated, sang and danced for the glory of God. Nobody could understand sister Mahādevī's intense love for Śiva : "What do the barren women know of birth pangs ? What do stepmothers know of an affectionate caress ? How could anybody know my grief and the misery of separation from my Lord ?"

Sister Mahādevī discerned God everywhere in the forest-in all the great trees in the forest, in the birds and the beasts, and in all the natural environment around her. She firmly believed that there should be no gender inequality because the soul is neither male nor female. In her view, there is no religion without love and devotion. Furthermore, there could be no devotion without knowledge and no knowledge without devotion.

Obsessed with her intense devotion to Śiva, nothing else mattered to Mahādevī except completely immersing herself in the service of her Lord. Her love affair with God knew none of the limitations of the traditional roles of marriage and family life. In fact, she rebelled against traditional women's roles and social expectations.

While manifesting a cosmic romance with Lord Śiva, the life of Sister Mahādevī provides a glorious illustration of a devotee's transition from the ephemeral to the eternal, and from the terrestrial to the celestial echelon. She is one of the celebrated mystics and saint-poetesses of the *Vīraśaiva* religious tradition. Her entrancing devotional lyrics suggest the spiritual heights she attained by sublimating her worldly desires.

Sister Mahādevī belongs to a fervent band of female devotees who expressed, in radical ways, their lofty love of the Divine, the uncompromising nature of a conjugal and loving

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relationship, a yearning for the Supreme Reality, the pain of separation, and the ecstasy of a spiritual union with the Lord. Mahādevī's lyrics enunciate her transcendental vision of Lord Śiva and are known for their deep devotion, picturesque and poetic imagery, metaphor and melody, and elegance and spiritual resilience.

Mahādevī's astounding asceticism and poetic genius converged for her to experience the majestic and exalted love of the Divine. Sister Mahādevī is indeed one of the world's most prominent female mystics, and perhaps the youngest-a mystic who, more than eight centuries ago, rebelled against gender inequality and traditional social restraints.

V

As a devotee, Saint Siddharāma gratefully acknowledged Śiva's Grace : "How bounteous is your grace, O Lord !" According to Siddharāma[7] one becomes a real devotee after sublimating the taints associated with the body, mind and wealth. He proclaimed that the devotee must heartily worship Lord Śiva. In fact, his heart was rapt in love, his body was dissolved, and the Lord permeated his soul. His mystical ecstasy knew no bounds. Siddharāma stated that a devotee of Śiva is all compassionate and, as he is enriched with Śiva knowledge, perceives all living beings as being on a common footing.

Furthermore, the devotee is expected to lead a life of righteousness. Saint Siddharāma strongly suggested that the ideal devotee who surrenders everything (body, mind, and wealth) to Lord Śiva becomes a saint (*śaraṇa*) by sublimating his lust, anger, greed, pride, jealousy and so forth. He then becomes a great soul, devout and virtuous. He is the one who practices what he preaches and preaches what he practices. He is unaffected by joys and sorrows or praise and censure. He accepts, with equanimity, whatever fortune or misfortune occurs as Śiva's grace. The "*śaraṇa*" is beyond thought and speech. In other words, he is the embodiment of Śiva himself.

Saint Prabhu was another great *Vīraśaiva* philosopher and mystic who affirmed that divine knowledge and right action or behaviour without devotion are fruitless. He contended that a devotee is he who has realized the Supreme Reality by severing the knot that knits the body and soul together and lives a life that is all dedicated to God. For Prabhu, pride and devotion

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7. Menezes A. and Angadi S. M., (trs.), *Vacans of Siddharāma* (1978), pp. 1-529, Chekki D. A., "*The Vīraśaiva Philosophy and Mysticism in the Lyrics of Siddharāma Śivayogī*", 2002, pp 25-34.

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never go together. Furthermore, Prabhu asserted that it is only through the harmonious blending of a unitive Śiva knowledge, love and devotion, and discipline and action, that one can attain the holistic experience of the Divine. Prabhu[8] described the essential nature of spontaneous love and devotion toward God by comparing it, through poetic metaphors and images, to the love between the tortoise and her young, the convenant between the cuckoo and the crow, and the discrimination of the swan in sorting out milk from water. Prabhu argued that when the Divine consciousness dawns, then devotion, knowledge and discipline merge into the Supreme Reality.

Saint Chennabasava[9] was one of the stalwarts of the *Vīraśaiva* movement who made a major contribution to the *Vīraśaiva* philosophy and metaphysics. He emphasized the importance of both devotion and knowledge of the Śiva principles, and maintained that knowledge without action is lame while action without knowledge is blind. Both Basava and Chennabasava observed that true devotion is very hard to attain. It is like a double-edged sword. In speaking of the relationship between the *Guru* and the devotee, Chennabasava indicated that such a bond should be like light hidden in light, like an image hidden in a mirror, and so forth. He submitted, referring to himself as a devotee of those devotees who offer their body, mind, and wealth to Lord Śiva.

Saint Siddhaliṅgeśvara (15th century), another eminent *Vīraśaiva* philosopher mystic[10], dealt with the concept of an ideal devotee and true devotion. To Siddhaliṅgeśvara, a devotee should be free from lust, anger, greed, pride, jealousy and delusion. A devotee is one who lives in holy discipline, identifies with Śiva through piety, and lives in the spirit of service. Siddhaliṅgeśvara believed that a true devotee, by offering wealth, a sense of self, and his life, can assimilate Lord Śiva into his body, mind and soul. The real devotee is pure bliss, having both Śiva discipline and a pure heart. According to Siddharaliṅgeśvara, the spirit of Śiva itself is embodied in a true devotee, and the spirit of devotion itself is Śiva. In other words, Śiva is the devotee, and the true devotee is Lord Śiva.

VI

In the *Vīraśaiva* philosophy and practice, emphasis is placed on both devotion and dedicated

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8. Chekki D. A., "*The Philosophy and Ethics of the Vīraśaiva Community*", 2003, pp. 77-96, pp. 117-123 ff., Nandimath S. C. *et al*, *Śūnyasampādane*, 1965-1972, Vol. I, pp. 137-198; 199-360 ff.
9. Hiremath R. C., 1978, pp. 25-54 ff.
10. Menezes A. and Angadi S. M. (Trs.), *Essence of Śatsthala*, 1978, pp. 1-385.

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work (*kāyaka*) and service (*dāsoha*). Devotion, Śiva knowledge and action should go hand in hand. Devotion should never be pursued for applause or admiration. The pride of wealth and egoism eat into the heart of devotion. A devotee should put his best effort into his work since he is trying to express the Divine in himself through his work (*kāyaka*), which is itself dedicated to God.[11]

Devotion has been an integral part of the *Vīraśaiva* spiritual system and process. However, what distinguishes the *Vīraśaiva* religious tradition from the various *bhakti* movements found in other parts of India is its unique spiritual path of Śivayoga, which is a blend of devotion (*bhakti*), knowledge (*jnāna*), and action (*karmayogas*). Above all, the *Vīraśaiva* reform movement revolted against all forms of inequality and injustice based on one's status at birth, gender, heredity, occupation, power and privilege, and created an egalitarian community of Śiva devotees. The *Vīraśaiva* revolutionary[12] saint-poets, through thousands of exquisite devotional lyrics, not only expressed their mystic experience, but also revealed, more than eight centuries ago, their radical ideas of a democratic and just society.

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11. Chekki D. A., "*The Vīraśaiva Religious Tradition : Is it a Religion Distinct from Hinduism ?* ", 2008, pp. 27-42.

12. Schouten J. P., 1991, pp. 21-97 ff.

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THE BODHISATTVA IDEAL AND GLOBALIZATION ON THE BASIS OF *BODHICARYĀVATĀRA*#

Ramanath Pandey*

The process of globalization in today's world compels us to understand the world as a single unit, and deeply affects all aspects of our lives - economic, political and cultural. Buddhism retains its core concepts, yet has the capacity to include and develop new practices, which make its impact global. That is why with its concept of the Bodhisattva; it has been able to move through countries, through cultures, through centuries. The Bodhisattva performs deeds, not for himself but for all sentient beings, such as human beings, animals, trees, plants and all other organisms, for their welfare, their ethical and spiritual upliftment. This ideal has a universal and eternal relevance, more so in the present age of the danger of globalized destruction. Put simply, a self-centred attitude is the source of all sufferings - of one's own and of others, while selfless attitude and a concern for others is the source of happiness, well-being and welfare of all - including one's own self. The Bodhisattva ideal, thus, deserves a global spiritual response to meet the challenges of this age. The concept of the Bodhisattva - the ego-liberated ideal and model teacher, - can be the saviour of the present world from its global gloom of personal over-ambitions and ignorance. The present paper tries to demonstrate this *Mahāyāna* concept of the Bodhisattva, on the basis of *Bodhicaryāvatāra* of Śāntideva, as ideal giving solutions to the present-age challenges.

The Bodhisattva ideal: According to the Bodhisattva conception, because of being rational, the unique feature of human beings is that they think for the benefit of others, for all sentient beings are not concerned with their own welfare alone. This is what distinguishes human beings from animals. Therefore one should contemplate, "When pleasure is equally dear to others and myself, then what is 'so special' about me that I make an effort after pleasure for myself alone? When fear and sorrow are unpleasant for all, me and others, then, what is so special in me that I should protect myself not others."[1] What do these words of Śāntideva

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1. यदा मम परेषां च तुल्यमेव सुखं प्रियम् । तदात्मनः को विशेषो येनात्रैव सुखोद्यमः ॥8/95॥
   यदा मम परेषां च भयं दुःखं च न प्रियम् । तदात्मनः को विशेषो यत्तं रक्षामि नेतरम् ॥
   बोधिचर्यावतारः - 8/96, श्रीपरशुरामशर्मा, मिथिलाविद्यापीठप्रधानेन प्रकाशितः, 1960, and शिक्षासमुच्चय, *kārikā*-1.

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mean? We can understand this concept in the light of western perspective easily. In the words of C.J. Hayden "The world is a mess. The world has always been a mess. But there is something we can do to lessen our suffering, and that is to strive to alleviate the suffering of others, whenever and wherever we can. And there's no time to lose." In the words of Martin Luther King, "Life's most urgent question is: what are you doing for others?[2] The Bodhisattva ideal presents much nobler ideal than this. In *Bodhicaryāvatāra* it has been stated that 'Truly, whoever reciprocates for a service rendered is highly praised; but what can be said of a Bodhisattva who is not concerned with his own good?'[3] "Very hard indeed it is to obtain the blessing of the (right) moment (for birth as a human being) which, when obtained, is conclusive to the attainment of the *summum bonum*. If in the present life no thought is bestowed upon future welfare, whence again can such a combination (of favourable circumstances) arise?"[4]

The challenges of this global age: There's no question that these are scary times. Due to present global system we are confronting with two main challenges, an economic crisis, and a failing health care system. All other implications are included in these two. As human beings, we are facing challenges of a warming planet, terrorism, ethnic violence, various kinds of incurable diseases, and widespread hunger. The challenges arrayed against us seem daunting. Śāntideva acknowledged the vast suffering that pervaded his world. People everywhere are afflicted by war, hunger, poverty, disease, and sorrow. Therefore, Śāntideva (685 - 763 CE) explores the aspirations of the Bodhisattva. "May I avert the pain of hunger and thirst with showers of food and drink. May I become both drink and food for the immediate aeons of famine? May I be inexhaustible treasure for impoverished beings? May I wait upon them with various forms of offering. I give up without regret my bodies, my pleasures, and my good acquired in all three times, to accomplish good for every being."[5] As if life itself weren't harsh enough, humans were causing harm to each other daily through aggression, ignorance and greed.

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2. The world's a mess - so what else is new? How to Become a Hero You Are the Champion the World Is Waiting For, C. J. Hayden, MCC, Buddhism, life purpose, social action, Volunteerive, Jan. 2009, Wings Business Coaching, P.O. Box 225008, San Francisco, CA 94122

3. *The Bodhicaryāvatāra of Śāntideva, Entering the Path of Enlightenment*, Trans. With a Guide, Marion L. Matics, 1/31, Motilal Banarsidass (MLBD), Nov. 2009.

   कृते यः प्रतिकुर्वीत सोऽपि तावत्प्रशस्यते । अव्यापारितसाधुस्तु बोधिसत्त्वः किमुच्यताम् ।। बोधिचर्यावतार-1/31

4. क्षणसंपदियं सुदुर्लभा प्रतिलब्धा पुरुषार्थसाधनी । यदि नात्र विचिन्त्यते हितं पुनरप्येष समागमः कुतः ।। बोधिचर्यावतार-1/4 श्रीपरशुरामशर्मा, मिथिलाविद्यापीठ, 1960.

5. *Bodhicaryāvatāra - A Guide to the Buddhist Path of Awakening*, tr. Kate Crosby and Andrew Skilton, Oxford 1995, Chapter 3 vv. 8 - 10.

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The Cause of Suffering and *Bodhicitta* : According to Śāntideva there is only one source as the cause of all suffering, i.e., "I" : - 'All the harm with which this world is rife, all fear and suffering that there is, clinging to the 'I' has caused it! What am I to do with this great demon?'[6] It means that the main cause of global destruction is our selfish attitude. Due to this selfishness we harm other sentient beings. Therefore, Śāntideva gives stress on meditating on the altruistic aspiration to Buddhahood, i.e., *bodhicitta*. According to this concept a Bodhisattva thinks "The abandonment of all is *Nirvāṇa*, and my mind (*manas*) seeks *Nirvāṇa*. If all is to be sacrificed by me, it is best that it be given to beings."[7] Although it is not so easy but this is the only solution. In *Bodhicaryāvatāra*, he advocates a way of life dedicated to serving not ourselves, but our fellow humans. Nyima Tsering states "The twenty-first century has taught us that materialism alone is not enough. Spirituality can overcome materialism. We need an economic system that can combine wisdom and compassion with materialism, then our world will become a real Shambhala".[8] Compassion is a universal answer that helps to vanish wretchedness and brings out bliss for all beings whether they belong to this world or to another world. It is an elemental constituent that drives the mechanism of bliss (*sukhāya*) for all. The real nature of compassion is a state of mind, which is often named as *bodhicitta*[9] in *Mahāyāna* philosophy, that is, wanting to attain perfect enlightenment in order to save other sentient beings with a virtuous motivation. The term *Karuṇā* (in *Mahāyāna* tradition), is often translated in English, as compassion, sympathy, kindness. It overlaps *Mahākaruṇā*, the infinite pity of the Buddhas and Bodhisattvas, and grace of their response as they attempt to help and support in times of hardship and distress to all beings.[10] This characteristic of Bodhisattva can be compared with the *Jizo* or *Ti Tsang* (Sanskrit - *Kṣitigarbha*) a popular Bodhisattva in Japan and China. Jizo is known for aiding those who are lost. His greatest compassionate Vow is : 'If I do not go to hell to help the suffering beings there, who else will go ... if the hells are not empty I will not become a Buddha. Only when all living

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6. उपद्रवा ये च भवन्ति लोके यावन्ति दुःखानि भयानि चैव ।। सर्वाणि तान्यात्मपरिग्रहेण तत्किं ममानेन परिग्रहेण ।। बोधिचर्यावतार-8/134

7. सर्वत्यागश्च निर्वाणं निर्वाणार्थि च मे मनः ।
त्यक्तव्यं चेन्मया सर्वं वरं सत्त्वेषु दीयताम् ।। बोधिचर्यावतार-3/11

8. *Searching for The Real Shambhala* by Laurance Brahm- "What we are talking about now is need for a new economic system," Published by Hongkong Culture on 12/01/2007

9. The Thought of Enlightenment, Enlightenment consciousness. The spark or impulse stimulating the effort to achieve Enlightenment. *The Bodhicaryāvatāra of Śāntideva, Entering the Path of Enlightenment*, Marional L. Matics, MLBD 2009, pg. 306

10. *Ibid.* pg. 310

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beings have been saved, will I attain *bodhi*.' Various traditions within Buddhism believe in certain specific Bodhisattvas. Some Bodhisattvas appear across traditions, but because of verbal differences may be seen as separate entities.[11] The Bodhisattva ideal provides adequate solutions for challenges thrown by the global destruction, through its code of conduct and norms of morality. According to the Bodhisattva concept, animals also possess the Buddha-nature, and sometime destined for Buddhahood. It teaches us that as a human being we should recognize and respect their Buddha-nature and treat them kindly. These apply not only to animals but also to trees, plants, and all other beings. We find such example in Buddhist literature especially in *Jātaka*s that Buddha himself had taken the forms of an animal when required. [12]

The Environmental Problems: Before discussing the role of Bodhisattva in solving the environmental problems it will be worthwhile to highlight some important features of environmental issues. There are mainly three categories of environmental problems: natural disasters, technological catastrophes, and long-term environmental degradation. It is important to point out how these categories are increasingly overlapping. "Many natural disasters, if not caused openly and directly by human intervention, are worsened by human factors. Global warming seems to be causing an increase in hurricanes and their severity. Deforestation promotes floods and landslides because the natural buffers of the forests no longer absorb the rainfall they used to. Even the spread of human habitation increases the likelihood of the loss of property and life in natural disasters. So, the boundary between natural disasters and technological catastrophes is more blurred than before.[13]". The main cause of all these problems is our behaviour and understanding towards other beings such as humans, animals, plants, other organisms and natural resources. According to medical sciences, everything existing in this universe, matter or energy, living or nonliving, is medicine if properly used, so it is very important to save or conserve them properly.

The Bodhisattva's role in solving the Environmental Problems: The Bodhisattva ideal provides adequate solutions to solving the environmental problems through its code of conduct and norms of morality. The entire practice of the Bodhisattva is categorized under the six

11. *Jizo* or *Ti Tsang* : *Kṣitigarbha* Bodhisattva, Buddhist studies : Deities and Bodhisattvas, Buddha Dharma Education Association & BuddhaNet.

12. Some thoughts on solutions for modern crisis, Ven.Dr. Thich Phuoc Chi, Vietnam Buddhist University. See on Website.

13. Ecopsychology, Environmental Problems, and Environmental Action, John V Davis, Website : www.johnvdavis.com

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perfections (*Pāramitās*) - generosity, ethics, patience, effort, concentration and wisdom. These are directly related to all the implications mentioned above. A Bodhisattva who practices six perfections means the person who protects and conserves the environment because he or she works for all sentient beings. Therefore the Bodhisattva's codes of conduct and ethical norms are fully competent to solve the environmental problems generated by globalization. Bodhisattva's deeds in general and specifically continuance in a course of action in spite of difficulty or lack of success for solving the environmental problems fit with the Bodhisattva path accordingly. *Dāna-pāramitā*, charity or generosity, signifies doing something good for a person as well as for the nature. *Śīla-pāramitā*, morality or ethical conduct, stands for the instruction of not to harm or kill any living beings - humans, plants, trees or any other organism, and not to indulge in stealing etc.. *Kṣānti-pāramitā*, (the perfection of Perseverance or patience), means in course of doing good for other living beings lot of problems may arise, even in that situations we should have patience, and till the fulfillment of our objective our actions must continue. *Vīrya-pāramitā* (effort), it is the state of mind that delights in virtuous actions, therefore it is considered as forerunner of all virtuous actions. Indeed, "Without effort there is no merit, as without the wind there is no movement".[14] A meritorious effort is necessary towards providing a greener and healthier environment. *Dhyāna-pāramitā*,(concentration), it is the mental state of focusing single pointedly on a virtuous object. It means our mind should be concentrated on single point, i.e., welfare for all. The main objective of Bodhisattva is to remove wretched state of all sentient beings whether they belong to this world or other. So the whole concentration should be on this point. The sixth perfection is *Prajñā-pāramitā,* the Perfection of Wisdom or real understanding. For performing all kinds of virtuous actions appropriate and minute vision is compulsory. This is of two kinds, for example, right understanding, and true or real understanding which are beyond the veiled.[15] This perfection is directly related to ecopsychology and environmental psychology. One of the necessary cornerstones of ecopsychology and environmental psychology is a contribution to understanding and solving environmental problems. Thus protecting and conserving the environment is not separate from the ethical code and conduct of Bodhisattva ideal.

Ethnic Violence and Concept of Bodhisattva Ideal: The process of globalization compels us to understand the world as a single unit, and deeply affects all aspects of our lives. Therefore we are not only concerned with individual ethnic groups or nations but with all of mankind.

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14. न हि वीर्यं विना पुण्यं यथा वायुं विना गतिः ।। बोधिचर्यावतार-7/1

15. संवृत्तिः परमार्थश्च सत्यद्वयमिदं मतम् । बुद्धेरगोचरस्तत्त्वं बुद्धिः संवृत्तिरुच्यते ।। बोधिचर्यावतार-9/2

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Ethics between ethnic groups indicates showing respect and fairness towards other groups, cultures, languages, customs, and religions different from ours. Faced with the current multi-ethnical situation, it is best to open our heart and minds to make contact and establish friendly relations with each other, behave with each other with mutual respect and fairness, learn from and contribute to each other. That way, we can really establish the richness and noble value of a pluralistic society. When coming into contact with other ethnic groups, we must not act from a sense of superiority and not think them inferior, and definitely not be hostile to them. Even if they do not behave in positive manner we should treat them in a friendly manner and interact with them in all sincerity so as to learn from and serve our new friends. Then we will certainly be able to achieve unexpected growth and new rewards. In words of Śāntideva - "If one becomes angered at the motivation which prompts someone to throw a stick or the like at a person, he too is motivated by hatred; but for me let there be hatred of the hate."[16] On the other hand, if we treat them like our relatives or neighbours, they will also show a friendly attitude, and in this manner we will be able to sort out our minor differences and develop the great equalities between us. Śāntideva has asserted that we should always treat others well because the conduct is just like a bridge of all other qualities. "The perfections of generosity and so forth are progressively more and loftier. One should not forsake a better one for the sake of a lesser, unless it is in accordance with the bridge of the Bodhisattva way of life. Realizing this, one should always strive for the benefit of others. Because the compassionate one who foresees benefit even that which is prohibited has been permitted for him."[17] As a saying goes: 'Virtue is not left to stand alone. He who practises it will have neighbours.' The forming of the Chinese nation was exactly because of their ability to assimilate different ethnic groups by caring for and protecting them. Creating splits between ethnic groups or rejecting different ethnic groups is certainly not to be tolerated in the modern world. "In the face of diverse and far-reaching problems, such as atomic weapons or human rights, we are challenged to accept the great variety of nations, cultures and religions and to find ways for a peaceful, harmonious human society, now and in future."[18]

Terrorism and Bodhisattva Ideal: Although the term terrorism as such has not been used, we find this very concept in the Buddhist text; *Bodhicaryāvatāra.* According to the

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16. Trans.- Marion L.. Matics 6/41

मुख्यं दण्डादिकं हित्वा प्रेरके यदि कुप्यते । द्वेषेण प्रेरितः सोऽपि द्वेषे द्वेषोऽस्तु मे वरः ॥ बोधिचर्यावतार-6/41

17. उत्तरोत्तरतः श्रेष्ठा दानपारमितादयः । नेतरार्थं त्यजेच्छ्रेष्ठामन्यत्राचारसेतुतः ॥ बोधिचर्यावतार-5/83

18. Redemption in Mahāyāna-Buddhism with Special Consideration of the *Lotus Sūtra,* Yoichi Kawada, *Tokyo Inter-religious Dialogues Christians and Buddhists,* Vol. 31, NR XI, MMI (2001), Annals of the European Academy of Sciences and Arts.

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Bodhisattva's concept of mindfulness, all thoughts good or bad originate from mind. Thus mind plays very important role in all sorts of actions. So terrorism is only a creation of our mind, nothing else. Therefore Śāntideva thinks that "Tigers, lions, elephants, bears, snakes, all enemies, all guardians of hells, Ḍākinis (evil spirits) and demons become controlled by controlling the mind alone. By subduing the mind alone, they all become subdued. Propounder of the Truth (The Buddha), said that all fears and immeasurable sufferings arise from the mind only."[19] Thus all kinds of suffering arise from the mind itself. It reminds us of a very famous adage of *Dhammapada*, "The mental natures are the result of what we have thought, are chieftained by our thoughts, are made up of our thoughts. If a man speaks or acts with an evil thought, sorrow follows him as a consequence even as the wheel follows the foot of the drawer, i. e. the ox which draws the cart. And in the same way if he speaks or acts with a pure thought, happiness follows him in consequence like a shadow that never leaves him."[20] In the words of Dr. Radhakrishnan - "As a matter of fact, the impact of thought on human life and society is great. All that we are is the result of what we have thought. In one sense it is true that we live in a world of hard facts, but in a more important sense we live in a world of thoughts. By changing our thoughts we change our life and indirectly we change the character of the world."[21]

There are three main enemies of Bodhisattvas - the ego, passion, and hatred; and their weapons are generosity, patience, perseverance, and wisdom.[22] These weapons have been proved an asset in all times for killings all three above mentioned enemies of Bodhisattvas. A famous pre-Buddhist Indian adage is actuated by a noble motive: "What is the merit of him who does well to his benefactors? The wise call him good who does well to his harm-doers."[23]

Nature of suffering: It is very important to learn and understand the various kinds of

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19. Eng. Trans. Śāntideva Online and the *Bodhicaryāvatāra* Historical Project (BHP)

    व्याघ्राः सिंहाः गजा ऋक्षाः सर्पाः सर्वं च शत्रवः । सर्वे नरकपालाश्च डाकिन्यो राक्षसास्तथा ।।4।।
    सर्वे बद्धा भवन्त्येते चित्तस्यैकस्य बन्धनात् । चित्तस्यैकस्य दमनात् सर्वे दान्ता भवन्ति हि ।।5।।
    यस्माद् भयानि सर्वाणि दुःखान्यप्रमितानि च । चित्तादेव भवन्तीति कथितं तत्त्वादिना ।।6।। बोधिचर्यावतार-5/4-6

20. मनोपुब्बङ्गमा धम्मा मनोसेट्ठामनोमया, मनसा च पदुट्ठेन भासति वा करोति वा।
    ततो नं दुक्खमन्वेति चक्कं व वहतो पदं ।.....ततो पं सुक्खमन्वेति छाया व अनपायिनी । धम्मपदं 1/1-2

21. *The Dhammapada*, S Radhakrishnan, Oxford University Press, 1950, see notes 1.1

22. *A Flash of Lightning in The Dark of Night*, Dalai Lama, 1994.

23. उपकारिषु यः साधुः साधुत्वे तस्य को गुणः । अपकारिषु यः साधुः स साधुः सद्भिःरुच्यते ।।
    See, *Systems of Buddhistic Thought*, Yamakami Sogen, University of Calcutta, 1912, pg.60.

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sufferings. After getting knowledge through textual sources and practical lives we should contemplate on all those points which are the causes of sufferings. In fact, in general no one, either god or self, is master of all sufferings. There is no law about self or others, the pain is pain either it belongs to me or to other it should be alleviated. So there is no contradiction regarding the alleviation of suffering, all agree on this point. But here one question arises: why should we be compassionate if the compassion is greatly painful? After thinking the pain of the whole world, how great is the pain of the compassionate?[24] In scientific laboratories, many animals are tortured with various equipments. All this happens just for the various kinds of experiments to know how various organs function in human body. Can this kind of act of a scientist be justified under the Buddhist perspective? Really, it is not so easy to justify this act, though their chief aim is to help and prolong the life of human beings. A scientist does this without any sentiment or compassion or feeling of love for creatures. Pain is pain whether it belongs to me or others. According to Dalai Lama "In the West there are groups who protest against such kind of treatment of animals because of their compassionate attitude towards animals. I support this effort"[25] In this regard Śāntideva has clearly stated that "If the suffering of the many comes to an end by the suffering of the one, then that suffering ought to arise from sympathy of oneself and of others".[26] It means if someone having good intention performs acts, beyond the code of conduct prescribed for Bodhisattva ideal, for the welfare of many, then that is permissible for him or her. If he or she acts beyond the custom of his own society for the sake of benefit for others, then it is not a kind of sinful act.

Present Medical Sciences and Bodhisattva Ideal: In the present world the organ transplantation is most important way of treatment in medical science. The idea is that when a patient's organ fails then it is replaced with suitable organ. But all this depends on a person whether he or she can afford its cost or not. In western world donation of the organs is also prevalent to save other's life as an act of love. But according to the concept of Bodhisattva ideal it is because of compassion which is much nobler than any other tradition. A Bodhisattva's whole life is *dāna*, because of his or her understanding that he or she is not distinct from others. A Bodhisattva is always ready to dedicate his entire possessions for the sake of benefiting all. The concept of the practice of organ transplantation in modern medical science

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24. दुःखं कस्मान्निवार्यं चेत्सर्वेषामविवादतः । वार्यं चेत्सर्वमप्येवं न चेदात्मापि सत्त्ववत् ॥
कृपया बहुदुःखं चेत्कस्मादुत्पद्यते बलात् । जगद्दुःखं निरूप्येदं कृपादुःखं कथं बहु ॥ बोधिचर्यावतार-8/103, 104

25. *The Way to Freedom, Core Teaching of Tibetan Buddhism*, The Library of Tibet, His Holiness, The Dalai Lama, Ed. John F. Avedon, Editor, Donald S. Lope Z, tr., Edition, 2000.

26. बहुनामेकदुःखेन यदि दुःखं विगच्छति । उत्पाद्यमेव तद्दुःखं सदयेन परात्मनोः ॥ बोधिचर्यावतार-8/105

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is clearly indicated in the following statement and other places especially in *Dāna-pāramitā* of *Bodhicaryāvatāra*. "Without any sense of loss I shall give up my body and enjoyments, also all my virtues of the three times for the sake of benefiting all."[27] Thus the *dāna-pāramitā* includes one's possessions as well as one's body. Many scriptural quotations relate to Bodhisattvas offering their bodies and organs to those in need. Therefore, *Mahāyāna* Buddhism firmly supports organ transplantation as benefiting both the donor and the recipient. Phillip A. Lecso in his article has discussed about attitudes towards the body and organ transplantation from a *Mahāyāna* Buddhist perspective. He also discusses the Bodhisattva practice of the perfection of giving in this regard, and the role of giving, and organ plantation as well as a brief discussion of Buddhist views on death and the dying process.[28]

Work Place and Bodhisattva Ideal: Following the norms of Bodhisattva's ideal at our work places we can sort out various kinds of problems which occur during our working hours. The norms of six perfections are fully competent to create healthy atmosphere among colleagues. Stress, tension and other implications will be far behind. Our positive attitude towards other fellow beings will be cause of success of the organizations as well as nations concerned. Kathryn Goldman Schuyler, in one of his articles, observes that he surveyed the fit between the lived reality in entrepreneurial organizations and the concept of Bodhisattva ideal for knowing whether the juxtaposition of these two, opposite conceptions can shed light on the effect of spiritual values in the workplace or not. He conducted semi-structured interviews with an array of entrepreneurs who had been practicing Buddhism for over three years to see whether they were using core elements of this concept in their daily work and, if so, how they experienced the value and impact of these notions. It showed that it was very much a part of the participants' daily work lives and seemed to be a force in creating a happier, more nourishing work environment.[29]

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27. आत्मभावांस्तथा भोगान् सर्वत्र्यध्वगतं शुभम् । निरपेक्षस्त्यजाम्येष सर्वसत्त्वार्थसिद्धये ।। बोधिचर्यावतार-3/10

    A Guide to the Bodhisattva's Way of Life, Full Acceptance of the Awakening mind. Verse - 10, trans. Stephen Batchelor, Library of Tibetan Works & Archives. See, The Bodhisattva ideal and organ transplantation, Michael Cheng-tek Tai, Department of Social Medicine, Chungshan Medical University, Taichung, Taiwan, Pub. Springer Wien, Oct 2009

28. The Bodhisattva ideal and Organ Transplantation: Phillip A. Lecso- The Medical College of Ohio, Toledo, Ohio, Springer Netherlands, Jan.2005

29. Being a Bodhisattva at Work, Perspectives on the Influence of Buddhist Practices in Entrepreneurial Organizations, Kathryn Goldman Schuyler, the Marshall Goldsmith School of Management, Alliant International University, *Journal of Human Values*, Vol. 13, No. 1, 43-60 (2007)

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Conclusion: Thus the Bodhisattva Ideal teaches us that *Nirvāṇa* means to dedicate our entire life for the welfare of others. This concept shows that our attitudes towards other beings should always be helpful. According to Buddhism whatever one gains that is not for one's own advantage, whether it is material or spiritual.[30] In fact *Nirvāṇa* and *Saṁsāra* are one, they are in no way to be separated from each other. Their spheres are the same and not the slightest distinction exists between them. This concept is also contained in following words "It is not for the sake of self, nor of heaven, nor for supremacy among the Gods, or enjoyment or prosperity of beauty, or noble birth or fame, nor for fear of hell or birth among the brute creation that virtue is to be practiced, but it is for the purpose of the acquirement of the means leading to Buddhahood, to *Nirvāṇa*, whereby all sentient beings may be made happy and may be benefited."[31] In regard to present global scenario, it is important that the present system should be linked with the ethical norms of Bodhisattva Ideal. We need change in the present system whether it is economic, political or cultural system that can combine with real understanding, wisdom and compassion with materialism, and then only our world will become pleasurable. According to Śāntideva, there have been countless *Bodhisattvas* who have vowed to save the countless numbers of sentient beings, and yet there is no end of suffering from the world. He explains that it is so because all these originate only from mind. So he asserts that if we restrain our minds then all sorts of problems material or spiritual can be solved. It means whatever we perform that should be done properly and wisely. He stresses for practical applications of teachings of Bodhisattva ideal in our way of life. Only verbal teaching is not sufficient in removing the wretched state of beings, as merely by reading the text of medical science, patient can not be cured.[32] Mental, verbal and physical, all actions are required equally, but mental act is the most important of all.

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30. सर्वत्यागश्च निर्वाणं निर्वाणार्थि च मे मनः । त्यक्तव्यं चेन्मया सर्वं वरं सत्त्वेषु दीयताम् ॥11॥
यश्चासुखीकृतश्चात्मा मयायं सर्वदेहिनाम् । घ्नन्तु निन्दन्तु वा नित्यमाकिरन्तु च पांसुभिः ॥12॥ बोधिचर्यावतार-3/11-12

31. नात्महेतोः शीलं रक्षति न स्वर्गहेतोः, न शक्रताहेतोः, न निरयभयभीतः, न तिर्यग्योनिभयभीतः ।
अन्यत्र बुद्धनेत्रो प्रतिष्ठापनाय यावत् सर्वसत्त्वहितसुखयोगक्षेमार्थिकः रक्षति ॥
Buddhistic Thought, Yamakami Sogen, *Systems of* Sogen, University of Calcutta, 1912, pp.56, 57.

32. कायेनैव पठिष्यामि वाक्पाठेन तु किं भवेत् । चिकित्सापाठमात्रेण रोगिणः किं भविष्यति ॥ बोधिचर्यावतार-5/109

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DERIVATION OF DECLENSION OF *ASMAD* AND *YUṢMAD* IN *JAINENDRA* GRAMMAR

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It is well-known that there are many traditions of grammar apart from Paninian tradition namely *Cāndra, Kātantra, Jainendra* and *Śākaṭāyana.* Scholars have been studying them seriously. Dr. Belvalkar and Dr. Scharfe have given brief accounts of all the systems of grammar in their works[1].

The function of grammar is to derive forms of words and systematize them through commonality. In the process of derivation of inflected forms of pronouns in Sanskrit it is very difficult to establish the relation between actual forms and grammatical stems. This observation gets strengthened by the way Pāṇini (hereafter P) treats them[2], e.g; *saḥ sā* of *tad* pronoun, *asau amū amūni* of *adas* etc. Likewise the forms of *asmad* (hereafter *as*) and *yuṣmad* (hereafter ys) are also difficult for derivation. P is known for brevity but he spends a lot of material to derive these forms of *as* and *ys.*

It is interesting to investigate how other grammars have dealt with this issue. In the present paper we try to study *Jainendra* (hereafter J) grammar from this point of view.

It is believed that J grammar is written by Devanandī alia Pūjyapāda[3]. According to S. K. Belvalkar, the date of J grammar is later part of fifth century AD[4]. Yudhisthira Mimamsaka has accepted the date of J grammar as sixth century AD[5].

There are two versions in which J has come down to us. The shorter one, which consists of about 3000 rules, is followed by Abhayanandī in his glossary on this grammar. The other, longer

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1 Belvalkar S. K. , See *Systems of Sanskrit Grammar* and Scharfe Harmut, *Grammatical Literature*

2 See section III of this paper

3 Belvalkar (1997) P. 53

4 *ibid*

5 Tripathi Shambhunath, *Jainendra Vyākaraṇa* ed., Introduction P. 32

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one gives 700 additional rules which are not found in shorter version. It is followed by Somadevasūri in his commentary called *Śabdārṇavacandrikā* which was composed in 1025 AD.

Abhayanandī's commentary is known as *Mahāvṛtti* and *Śabdārṇavacandrikā* is known as *Laghuvṛtti*. It is believed that Abhayanandī's version is older whereas *Śabdārṇavacandrikā* is constructed later. J is known as *anekaśeṣam* (without the chapter on *ekaśeṣa*) which is a distinctive feature of J. *Ekaśeṣa* chapter is not included in Abhayanandī's version and it is included in *Śabdārṇavacandrikā*. Hence scholars have argued that Abhayanandī's version is older[6].

There is another work called as *Jainendra-Prakriyā* composed byVaṁśīdhara. The date of this work is 20th cen. AD. In this book the rules are arranged according to *prakriyā* of a word, just like *Siddhāntakaumudī*.

We base our arguments on these sources. J deals with the declension of *as* and *ys* in first subsection of fifth chapter (5.1). There is a separate chapter for these declensions in *Jainendra-Prakriyā* i.e. *Aliṅgaprakaraṇa*.

We have followed Abhayanandī's version for the present study.

This paper is divided into three parts; Section I, II, III.

Section I contains table of rules and their application, *prakriyā*. In this table, first part contains the statement of the rules employed by J in order to derive the declension of *as* and *ys*. In this statement briefly the application of the individual rule is stated. The second part contains *prakriyā* of the declension of *as* and *ys* according to J.

Section II contains comparison between P and J.

Section III contains conclusion.

6 Belvalkar (1997), P. 54

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Section I.i Comparison between J and P

Rule No.	Rule	Application
5-1-150	मावधेः	अधिकारसूत्रम्
5-1-24	ङेसुटोरम्	सु औ जस् अम् औट् ङे अम् अम् अम् अम् अम् अम्
5-1-153	त्वाहौ सौ	युष्मद् सु त्वद् सु अस्मद् सु अहद् सु
5-1-151	युवावौ द्वौ	युष्मद् औ युवद् औ अस्मद् औ आवद् औ
5-1-149	स्वमादेशे	त्वद् सु त्व सु अहद् सु अह सु
5-1-147	आवि	युवद् अम् युवा अम् आवद् अम् आवा अम्
5-1-152	यूयवयौ जसि	युष्मद् जस् यूयद् जस् अस्मद् जस् वयद् जस्
5-1-156	त्वमावेके	युष्मद् अम् टा ङस् ङि त्वद् अम् टा ङस् ङि अस्मद् अम् टा ङस् ङि मद् अम् टा ङस् ङि
5-1-146	इपि	त्वद् अम् त्वा अम् मद् अम् मा अम्
5-1-25	शसो नः	युष्मद् शस् युष्मद् न्स् अस्मद् शस् अस्मद् न्स्
5-1-148	यः	त्वद् टा त्वय् आ मद् टा मय् आ

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5-1-145	युष्मदस्मदोः	युवद् भ्याम् युवा भ्याम् आवद् भ्याम् आवा भ्याम्
5-1-154	तुभ्यमह्यौ ङयि	युष्मद् ङे तुभ्यद् ङे अस्मद् ङे मह्यद् ङे
5-1-26	भ्यसोऽभ्यम्	युष्मद् भ्यस् युष्मद् अभ्यम् अस्मद् भ्यस् अस्मद् अभ्यम्
5-1-28	ङसेः	युष्मद् ङस् युष्मद् अत् अस्मद् ङस् अस्मद् अत्
5-1-27	अत्कायाः	युष्मद् भ्यस् युष्मद् अत् अस्मद् भ्यस् अस्मद् अत्
5-1-155	तवमम ङसि	युष्मद् ङसि तवद् ङसि अस्मद् ङसि ममद् ङसि
5-1-23	युष्मदस्मदो ङसोऽश्	युष्मद् ङस् युष्मद् अश् अस्मद् ङस् अस्मद् अश्
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Section I.ii

Jainedra	Pāṇini	
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युष्मद् ओस् ३।१।२
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युवद् ओस् ६।१।९७
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त्वयि

युष्मद् ओस् १।२।४५- ४।१।१- ४।१।२
युव अद् ओस् ७।२।९२
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युवय् ओस् ७।२।८९
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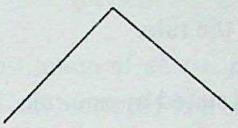
Section II

In this derivation, there is twofold division: 1) Substitution of stem



Substitution of *yuṣm* substitution of *d* (final)

2) Substitution of suffix

Taking into consideration the substitution of stem there are three types, when *as* and *ys* are followed by singular suffixes the substitutes are *tva* and *ma* respectively. The substitutes like *yuva* and *āva* occur when *as* and *ys* are followed by dual suffixes. There is no change in stem in plural forms. In this way the stem changes in each step of singular and dual forms. But the forms of nominative singular, nominative plural, dative singular and genitive singular are completely different as compared to others. Hence it is very difficult to derive the forms from a common stem.

P has achieved this aim by spending lot of material on it (19 rules). J has also spent same number of rules.

As far as the changes in the stem are concerned, J follows P. P states changes in the stem up to *m* in *as* and *ys*. All the operations related to the stem come under the section-heading rule *maparyantasya* (A. 7.2.91). J has also a rule *māvadheḥ* (J. 5.1.150). The substitutes of the stem come under this rule.

It is already stated that another change occurs for *d* in the stem. These changes are threefold: *yatva*, *ātva* and deletion of *d*. P states five rules related to it. All these operations come under the *adhikāra* '*vibhaktau*'[7]. J also spends rules for the same operations[8] and adopts the same system.

There are three operations but five rules. It is because P has given three separate rules for the same operation of *ātva*[9]. J also follows P in this matter. But he uses technical expressions like *ipi*, *avi* etc. The term *ipi* means *dvitīyā* (accusative case). The term *āvi* means the locative singular of the suffix *au*.

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7 *aṣṭana ā vibhaktau* I VII. 2. 84. The term *vibhaktau* continues up to VII. 2. 113

8 See rule V. 1. 145-149

9 See VII.1.86-89

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J has used these technical terms to simplify the application of the particular rule e.g. P states *prathamāyāśca dvivacane bhāṣāyām* (A.7.2.88). In this rule we have to infer that *ātva* takes place when *as* and *ys* are followed by *au*. But the use of the expression *āvi* makes clear the meaning of the rule.

The *yatva* is stated by one rule, in *A*, *yo 'ci* (A.7.2.89) and deletion of *d* is stated by the rule *śeṣe lopaḥ* (A.7.2.90). Here it is observed that P considers deletion as *utsarga* (general rule). Hence he uses the term *śeṣe*. The *yatva* and *ātva* are *apavāda* (exception) of it.

J considers *yatva* as *utsarga*[10]. The remaining operations like *ātva* and deletion of *d* are exception of it. This is an important difference between J and P.

The substitutes of suffixes are same as P. Also the method is same. P deals with the changes of suffixes in VII.1. Likewise J also deals with these changes in a separate section, V.1.23-29.

Here is the table for comparing the substitutes taught by P and J.

Case No.	Substitution
Nom. 1, 2, 3 Acc. 1, 2 and Dat. 1	*am*
Acc. 3	*n*
Abl. 1,3	*at*
Gen. 1	*aś*
Gen. 3	*ākam*

Table no. 1

There is only one difference in stating substitutes for dative plural. P states *bhyam* and J states *abhyam*. There is a technical problem in deriving *yuṣmebhyam* and *asmebhyam* with *bhyam* as a substitute.

If *bhyam* is substitute then the forms like *yuṣmebhyam* and *asmebhyam* might be formed. After applying deletion of *d* and *bhyam* is substituted then there is an undesired chance for applying *e* substitution by rule VII. 1. 103[11]. The rule prescribes substitution *e* for *a* in final

10 *utsargao 'yam ātvam kham ca apavādaḥ* । Jainendra p. 355

11 *bahuvacane jhalyet* । See *KV* on VII. 1. 30

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position of *aṅga* before a *jhal* sound. *Jhal* includes *bh*. Hence we get the forms like *yuṣmebhyam* and *asmebhyam*. But these are not desired forms. Hence *abhyam* is the way to avoid these undesired forms. J goes with this way-out.

P has given two rules for the same operation of substitution of *at*, i.e. *pañcamyā at*(A. 7.1.31) and *ekavacanasya ca*(A.7.1.32). This operation can be stated in a single rule. Why does P spend two rules? The answer given by Joshi and Bhate (1984) is 'the role of *ca* in this rule is resolving ambiguity by isolating rules'[12].

It is observed that the rules given by J are modified versions of P's rules, e.g. *ṅesuṭoram*(J.5.1.24). P's rule is *ṅeprathamayoram* (A.7.1.28). The term *prathamayoḥ* is replaced by the *pratyāhāra suṭ*. The term *prathamayoḥ* is genitive dual of *prathama*, which stands for nominative and accusative case. It means rule in *Aṣṭādhyāyī* states substitute *am* for all six suffixes. But to avoid over application of this particular rule, new rule is stated which is an exception of *am*[13]. In this way it is observed that meaning of A- 7-1-28 is incomplete without the knowledge of A-7-1-29. Hence J modifies the rule of P through which he gets benefit of achieving brevity.

J states *tyadyośca* (J.5.1.157)to achieve *tvattaraḥ, mattaraḥ, tvadīyaḥ, madīyaḥ* forms. P states *pratyayottarapadayośca*(A.7.2.98) for the same forms. Here as stated previously J achieves brevity by using the terms *tya* for *pratyaya* and *dya* for *uttarapada*.

In the rules *yuvāvau dvau* and *tvamāveke* the terms *eke* and *dvau* are used. The terms *ekavacane* and *dvivacane* are replaced here. The reason would be as follows *KV* interprets the words *ekavacane* and *dvivacane* as a mention of meaning[14]. It means *ekavacane* and *dvivacane* means "in the domain in which *as* and *ys* refer to two or a single item". The *Nyāsa* on the *KV* explicitly says that the term *ekavacane* and *dvivacane* should not be taken in its technical sense i.e. case ending. If they are taken into technical sense then according to SK, the substitutions taught by these two rules would not be applicable in a compound in which *as* and *ys* refer to duality and unity[15].

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12 See Joshi and Bhate,(1984) p. 32, 66

13 *śaṣo na* 7-1-29

14 *dvivacane ityarthagrahaṇam* ॥ *KV* 7-2-92
ekavacane iti arthanirdeśaḥ । *KV* on 7-2-97

15 *samasyamāne dvekatvavācinī yuṣmadasmadī* ।
samāsārtho 'nyasaṅkhyaścet sto yuvāvau tvamāvapi । *SK* P-I, p. 408

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The sense of this discussion is reflected in verses in SK. "When *ys* and *as* denoting a unity or a duality in themselves are member of a compound, which may denote any number then also *tva* and *yuva* will be substituted for *ys* and for *as ma* and *āva*.[16]

Prof. S. D. Joshi does not agree with this argument. According to him *ekavacana* in A always stands for morpheme, a singular ending and not for singular meaning.[17]

It seems that J is in favour of *arthagrahaṇa*, hence he accepts *dvau* and *eke* instead of *dvivacane* and *ekavacane*. Abhayanandī also interprets the rule in the same manner.[18]

Abhayanandī borrows four rules from P. Those are *tvāhau sau*(J.5.1.153) *yūyavayau jasi*(J.5.1.152) *tubhyamahyau ṅayi*(J.5.1.154) *tavamamau ṅasi*(J.5.1.155).

Section III

General Conclusion:-

The methodology of J can be analyzed in this way. It reveals the view adopted by J and its differences with methodology of P. They are: the operation of *yatva* is accepted as *utsarga* and the suffix *abhyam*. Why J considers *yatva* as *utsarga*? His rule is *yaḥ* (J. 5.1.148). It does not demand any special condition whereas other two operations namely deletion of *d* and *ātva* need special conditions. But P deals with the derivation differently. It is already said that deletion of *d* is *utsarga*. The reason would be as follows- the deletion of the final consonant is more natural rather to substitute it by other substitutes. P has more concern about the stem. This observation strengthens the fact that P more maturely derives these forms.

The problem faced in Paninian tradition in deriving the dative plural form is resolved with the suffix *abhyam*. But why P has accepted substitute *bhyam* instead of *abhyam* will be a subject of further study. It is more interesting to search what P has achieved by avoiding certain operation rather to see what he has achieved by accepting certain method.

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16 *yadīyaṁ pāribhāṣikasya dvivacanasya grahaṇaṁ syāt, tadā tasmin parata eva tāvādeśau bhavetām | tathā ca yadā samāse dvyarthe yuṣmadasmadī bhavataḥ ..... tadā na syātām iti | arthagrahaṇe sati iṣṭaṁ sidhyati |* *Nyāsa on KV* 7.2.92 .

17 See Joshi and Roodbergen, Vol.XI note no. 2 p.202.

18 *dvau iti arthagrahaṇam | eka iti ayam arthasaṁjñānirdeśaḥ |*

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J is also at loss to explain these forms in more systematic way than P. He follows P in this regard. Even the number of rules, their order and the arrangement is also same as P. In this process he achieves brevity to some extent. However, he recognizes the problem P faces as far as the rule formation in this regard.

Abbreviations

as *asmad*

J Jainendra

KV *Kāśikāvṛtti*

P Pāṇini

SK *Siddhāntakaumudī*

ys *yuṣmad*

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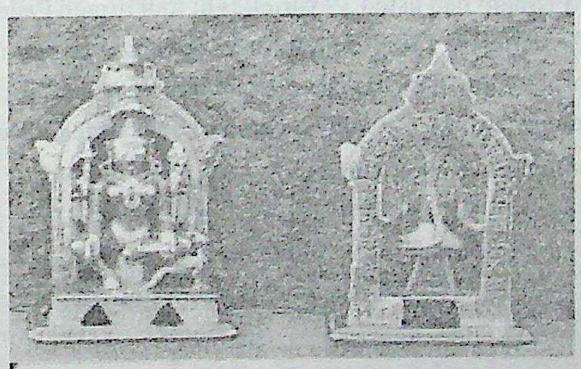
A NOTE ON AN UNKNOWN INSCRIBED METAL IMAGE OF PADMĀVATĪ IN JAIN TEMPLE, OSIAN

Devendra Handa*

Osian (26° 18′ N, 73° 1′ E), situated about 66 km north-northwest of Jodhpur, is a well-known place of pilgrimage in Western Rajasthan. Its early Pratihāra temples dedicated to Harihara, Sūrya, Viṣṇu, Śiva, Pīpalāmātā (*Mahiṣamardinī*), Sacciyāmātā (Sacchikā, Jaina *Mahiṣamardinī*) and Mahāvīra, the last two forming groups of shrines and still under worship, are a real delight to the students of history, culture, religion, art and iconongraphy.[1]

The Jain Temple Trust at Osian, possesses an inscribed metal image[2] of Padmāvatī, which forms the subject-matter of this note. About half a foot in height, it shows the *yakṣiṇī* of the twenty-third *Tīrthaṅkara* Pārśvanātha, seated on a decorated stool in *lalitāsana* with left leg folded and the right one bent at knee with its lower part slanting down and the foot placed on the ground (Pl. I). She has a square face with elongated ears wearing large circular *kuṇḍalas* 'earrings'. The head bears tapering five-tiered *karaṇḍa-muku-ṭa*. A pearl necklace with a big



Pl. I. Inscribed metal image of Padmāvatī, Jain Temple, Osian

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1. Handa, Devendra, *Osian, Archaeology, Art & Architecture*, Delhi: Sundeep Prakashan, 1984.
2. It has not been subjected to any metallographic analysis and it is difficult to say whether it is made of brass, octo-alloy or some other alloy. Seemingly, however, it looks to be bronze.

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round golden pendent. The double-stranded necklace looped from over the massive breasts, multiple bangles on the fore-arms, anklets and pearl strings serving as the waist band to secure the under garment, may also be seen on her person. The eyes are gilded, the nose looks like a tapering tower, lips are thick and the chin is rounded. The overall facial expression lacks serenity and is sanguine. She carries a goad in her upper right hand and noose in the corresponding left. Her normal right hand is suspended in *varada-mudrā* 'boon-giving posture' and the left holds probably a citron. She is sheltered by a three-hooded serpent which rises almost vertically as may be seen at her back. Her vehicle a *kukku-ṭa-sarpa* looking like a peacock with a long serpentine tail is shown in profile to right near and under her bent left leg. The inscription in western Indian *Devanāgarī* characters on the back reads as following –

[*Siddham* represented by a mark] *Saṃ. 1575 varṣe Upakeśa-gacche Ga. Kāntiratna-śiṣyeṇa Sarvānandena Padmāvatīkāritā* //

[(This image of) Padmāvatī was caused to be made (or consecrated) by Sarvānanda, the pupil of Gaṇi Kāntiratna in the *Upakeśa-gaccha* in the year Saṃvat 1575 (= CE 1518).]

The inscription thus gives us a precise date of the image and acquaints us of the stylistic traits of the period. U.P. Shah[3] had listed 32 varieties of four armed Padmāvatī and our image corresponds to Shah's Variety 3 (according to the *Digambara* tradition) or 7 (according to both the sects). The probability of its being a *Śvetāmbara* image is indicated for having been installed in the *Upakeśagaccha*. It may well be compared with the fourteenth century bronze Padmāvatī in the *Śvetāmbara* temple, Cambay.[4]

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3. Shah, Umakant P., *Jaina-Rūpa-Maṇḍana*, New Delhi: Abhinav Publications, 1987, pp. 280-81.
4. *Ibid*, p. 270, Fig. 101. See also the white marble Padmāvatī seated on a facing *kukku-ṭa* dated VS 1254 under worship in the *Digambara Jain* temple at Idar in Gujarat (*Ibid*, Fig. 117).

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ICONOGRAPHY OF NṚSIṂHA REPRESENTED IN THE *KARMAPAÑ-JIKĀ* OF THE PAIPPALĀDINS

Shilpa Sumant*

Introduction

The *Paippalāda* is a living tradition of the *Atharvaveda*. The followers of this school reside in Orissa and Jharkhand. In the absence of their *sūtra*, the Paippalādins use a *paddhati*-text, the *Karmapañjikā* (KP)[1] to perform their domestic rituals. From various factors, it is evident that the text is composed around 16th Century CE. For the typical *Ātharvaṇic* rites they use a corpus of *Āṅgirasakalpa*. Printed texts for both the corpuses, based on the selected material from the manuscripts, have been published by Pt. Umakanta Panda in the years 2000 and 2003.

Both the corpuses dealing with the domestic rites and typical Ātharvaṇic rites, may certainly add interesting information to the socio-religious and cultural history of India. In the present article, I wish to concentrate on one such aspect, viz. the iconography of Nṛsiṃha. As is clear from the title of the article, I have mainly based my observations on the description of Nṛsiṃha found in the verses of the KP and have compared that data with the *Āṅgirasakalpa* material wherever necessary.

Nṛsiṃha as *Iṣṭadevatā*

(Lakṣmī)Nṛsiṃha or simply Nṛsiṃha appears to have served as the collective iṣṭadevatā of the Orissa Paippalādins, if we may believe the previously quoted *Pūrvābhāsa* of U.K. Panda (2003): "*atharvedavidbrāhmaṇānām iṣṭadevā Śrīnṛsiṃhaḥ*". We have neither ethnographic nor textual data to support this statement in literal form, but it is clear that this deity indeed was and still is of major importance to this community.[2] If indeed (Lakṣmī)Nṛsiṃha was a collective *iṣṭadevatā*, we do not know whether it has been a common

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1 A critical edition of the text in collaboration with Arlo Griffiths is planned in three volumes, the first of which containing general paradigms of ritual, is expected to be ready by the beginning of 2011.

2 For the relevant evidence, see Sanderson (2007: 226) and Griffiths (2009: vi) for further references.

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phenomenon in Indian socio-religious history for entire communities to share one 'elective deity'. What seems certain, however, is that this deity was own *iṣṭadevatā*, of the author of the KP, Śrīdhara, for he states himself in the beginning of his text:

> *granthādau granthasya nirvighnaparisamāptyartham iṣṭadevatāṃ stauti /*
> *śrīnṛsiṃhaṃ namaskṛtya dhiyā vācā ca karmaṇā /*
> *bahiḥśālāvidhiṃ vakṣye sarvakarme*[3] *praśasyate //*

"At the beginning of the work, to ensure the unhindered completion of the work, he praises[4] his personal deity: "Having paid homage to Śrīnṛsimha in thought, speech and deed, I shall expound the precepts for the external pavilion. It is recommended in all rituals"."

Not only here, at the proper beginning of his work, and in similar opening verses at the beginning of each chapter, but also in the liminal *maṅgala* verses that precede the passage just quoted, does Śrīdhara pay homage to (Lakṣmī)Nṛsiṃha. The attributes of this deity that are mentioned in these various verses call for special discussion.

Iconographical Features of Nṛsiṃha

Let us begin by discussing the attributes in the very first *maṅgala* verse, which is remarkably irregular from both from the grammatical and the metrical point of view:

> *vande yaṃ paramaṃ vadanti munayaḥ śāntaṃ cidaṃ śāśvataṃ*
> *satyajñānamayaṃ himāṃśudhavalaṃ hārādibhir bhūṣitam /*
> *yogārūḍhaṃ ariṃdhanurvarābhayakaraṃ vāme śritāṃ cendirām*
> *śeṣakroḍe vasānaṃ nṛharim aniśam acintyam ātmasvarūpam //*

> "I praise him whom the sages call the highest, peaceful, conscious, eternal, true knowledge incarnate, white as the Moon, adorned with necklace and so on, steeped in *yoga*, with hands displaying his enemy (Hiraṇyakaśipu), a bow, the *vara* and the *abhaya mudrās* -- him, Nṛhari, who ever abides in the lap of Śeṣa, who is unfathomable, and represents the essence of the Ātman --, and [I also praise] Indirā who is leaning against his left side."

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3 We do occasionally come across such substandard forms in the usage of the priestly Sanskrit by the author of the KP.

4 We have to interpret here that Śrīdhara uses the verb *stauti* as referring to himself.

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The iconographical features mentioned in the first *maṅgala* verse by Śrīdhara more or less match with those attributed to this deity in *Puruṣottamamāhātmya* 28.27-31.[5] The text describes the vision of Nṛsiṃha, received by king Indradyumna after he had learned the *Nṛsiṃhamantra*. The attributes of Nṛsiṃha[6] in these *Puruṣottamamāhātmya* verses, resembling those seen in Śrīdhara's description are Nṛsiṃha's benevolent form, his seating in Yogic posture, his holding of a wheel and a bow, his reclining on Lakṣmī and Śeṣa having a cover on the God's head with his hoods. These attributes form the accepted iconographical features of Nṛsiṃha image throughout India and medieval Orissan art is no exception.

Let us go on discussing each iconographical feature in detail.

Yogārūḍha, seems to denote Yoga-Nṛsiṃha form, where Nṛsiṃha is in a particular posture such as *sopāśrayāsana*, i.e. a posture where legs are crossed and the raised knees are supported by *yogapaṭṭa* or *utkuṭikāsana*, i.e. a Yogic posture where one sits with heels kept close to the buttocks and with the back slightly curved and forearms resting in the knees raised above the seat. Sometimes, there is a *yogapaṭṭa*, i.e. a cloth or band round the knees encircling the hips as a support during meditation.[7] Along with these two postures, Donaldson (1993 (2001): 128) gives an account of images found in Orissa where Nṛsiṃha is seated in *sukhāsana*[8] or *lalitāsana*.[9]

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5 Included in the *Vaiṣṇavakhaṇḍa* of the Bombay *Skandapurāṇa*.

6 *mantrarājaṃ tato labdvā indradyumnaś caturmukhāt / nṛsiṃhaṃ śāntavapuṣaṃ lakṣmīsaṃśritavakṣasam // cakraṃ pināka̱ṃ dadhataṃ candrasūryāgnicakṣusam / jānuprasāritakarasarojadvandvam unnasam // yogapaṭṭāsanārūḍha-dvātriṃśad dalapadmake / mantravarṇamaye madhye karṇikāpraṇavojjvale // sukhāsīnaṃ sāṭṭahāsaṃ vīkṣantaṃ śrīmukhāmbujam / saṭāmaṇḍitavaktrābjaṃ divyaratnojjvalākṛtiḥ // phaṇāsahasraṃ vistārya paścāc chatrākṛtiṃ vibhoḥ /* "Then Indradyumna, after getting that great *mantra* from the mouth of Brahmā [had a vision of] Nṛsiṃha with pacific form, reclining on the chest of Lakṣmī, holding a disc, a bow, having eyes like Moon, Sun and fire, stretching his lotus-hands up to the knee, sitting on a seat of *yogapaṭṭa* on a lotus of thirty-two petals in the midst of the *mantra* having shining pericarp in the form of *Praṇava*, sitting in an easy posture, laughing loudly, looking at the face of *śrī*, whose lotus-face is adorned by matted hair, who is shining like precious stones. At the back of the lord is a canopy of thousands spread hoods. "

7 Cf. Liebert (1976: 354).

8 This means any comfortable sitting posture. But technically it is described as a pose where one leg, generally, the left one, rests flat on the seat while the right knee is raised upwards from it and the right arm is stretched out on the raised knee. Cf. Liebert (1976: 285).

9 This is also a posture of relaxation in which one leg, usually the left, is tucked upon the seat (*pīṭha*), while the right one dangles down along it and often shown resting on *karṇikā*. Cf. Liebert (1976: 151).

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The second attribute of Nṛsiṃha iconography mentioned here, and in several other verses composed by Śrīdhara, is his holding in two of his hands the enemy,[10] a bow while displaying with his other two hands the *vara* and *abhaya* gestures respectively. In the opening verse of chapter 9 of the KP,[11] we come across the compound *varāridhanuṣo 'bhīti* to explain these attributes. In the opening verse of chapter 7,[12] we have a slight variation upon this description with a wheel replacing the enemy.

This discussion of attributes pertaining to each hand makes us to conclude that Śrīdhara's verses describe four-armed Nṛsiṃha. In the opening verse of Chapter 16,[13] Śrīdhara indeed specifically mentions Nṛsiṃha as four-armed. In various Purāṇic and *Pāñcarātra* texts, describing Nṛsiṃha iconography, we come across Nṛsiṃha images having two, four, eight, twelve, sixteen or thirty-two hands.[14]

In actual sculptural practice, we find six-armed varieties of Nṛsiṃha images as well.[15]

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10 The enemy is the demon Hiraṇyakaśipu for whose destruction is believed the incarnation of Viṣṇu in the form of Nṛsiṃha. Cf. *Harivaṃśapurāṇa* 3-41-47, for the earliest reference to the myth of Nrsimha and Hiraṇyakaśipu. The myth is further developed to its fullest in the later Purāṇas. For instance, cf. *Bhāgavata Purāṇa* 7.8-10. All the aspects of the myth such as Nṛsiṃha's emergence from a pillar, his fierce form while killing the demon, having held this demon on his lap and tearing his belly and offering protection to Prahlāda, seem to be present in his iconography. However, it is not uncommon in India to find images of Kevalanṛsiṃha, i.e. Nṛsiṃha not accompanied by any other figure. Desai (1973: 88) informs that absence of the demon Hiraṇyakaśipu is a striking characteristic of most of Nṛsiṃha images in the Gupta period. However, in the post-Gupta period, Nṛsiṃha is almost invariably represented as killing the demon Hiraṇyakaśipu.

11 The verse is as follows: *Mahācakrasya nābhisthaḥ śeṣacchatrasubhūṣanaḥ / varāridhanuṣo 'bhītiḥ saśrīko 'vatu simharāṭ //* "The Lion-king, residing in the middle of the great wheel, decorated with Serpent-canopy, [hands displaying] *vara* [gesture], enemy, a bow, *abhaya* [gesture] should protect [us]."

12 The verse is: *śaraccandranibhaṃ devaṃ nṛsiṃhaṃ pītavāsasam / cakraṃ pināka mabhayaṃ varaṃ śeṣāṅkago 'vatu //* "God Nṛsiṃha, who is like the Moon of autumn, wearing yellow-coloured garment, [hands displaying] a wheel, a bow, *abhaya* and *vara* [gestures], positioned on the Serpent, should protect [us]."

13 However, the name Nṛsiṃha is not specifically mentioned in this verse. The verse is: *satyajñānasukhānandaṃ yogārūḍhaṃ caturbhujam / cakraṃ pināka m abhayaṃ varaṃ māṃ pātu mādhavaḥ //* "May Mādhava, who incarnates truth, knowledge, pleasure and happiness, steeped in the *yoga* posture, four-handed, holding a disc, a bow and *vara* and *abhaya* gestures protect me."

14 Cf. *Matsyapurāṇa* 269.31, *Agnipurāṇa* 49.17, *Nāradapurāṇa* 1.71.62-66. For *Pāñcarātra* sources, cf. Smith (1969: 138-146).

15 Cf. Desai (1973: 86, 90).

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Śrīdhara's description of Nṛsiṃha holding his enemy in one hand seems to be a unique feature. At least we can say that it contrasts with the textual data as well as with the sculptural representations known to us. Texts such as the *Agnipurāṇa*[16] describe Nṛsiṃha holding Hiraṇyakaśipu on his left thigh while tearing open his chest. In most of the Nṛsiṃha images in India, we see the enemy is lying on the lap and the god is tearing his belly with his two hands.

We read about a variety of Nṛsiṃha's weapons in Purāṇas and *Pāñcarātra* texts. The disc appears in most of the lists,[17] while a bow with arrow appears much more rarely.[18] The four-armed images that we see in Orissa, Nṛsiṃha is tearing the demon with his lower two hands and other two hands are with a wheel and a club, rarely a conch instead of the club. The bow is apparently never found as his attribute in Orissan sculptural representations.[19]

We understand from Donaldson's description (1993 (2001): 132) that four-armed Nṛsiṃha images, in which front hands display *varada* and *abhaya* gestures and uplifted back hands hold conch and wheel are more common in Orissa. It appears that Viṣṇu's two attributes, *śaṅkha* and *cakra* are invariably present in Orissan art while dealing with images of his incarnations as well. However, in Śrīdhara's description in the KP verses, a conch is totally absent.

The presence of Lakṣmī to the left side of the God indicates his peaceful nature. The *Puruṣottamamāhātmya* verses mentioned earlier, dealing with king Indradyumna's vision of benevolent Nṛsiṃha, describe him as accompanied by Lakṣmī. *Nāradapurāṇa* 1.71.51, which is a *dhyāna* verse, also describes presence of Lakṣmī to the left side.[20] The presence of Lakṣmī and sometimes goddess Earth as well, indicates benevolent character of Nṛsiṃha. *Vaikhānasāgamapaṭala* 58, explains that the goddesses must be shown at the God's sides for pacifying the fury.[21]

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16 49.4: *narasiṃho vivṛtāsyā vāmorudṛtadānavaḥ / tadvakṣo dārayan.* "The Narasiṃha (image is to be made showing him with) wide open mouth, holding the demon on the left thigh, tearing open his chest."

17 To note a few sources. cf. *Viṣṇudharmottarapurāṇa* 3.78.11, *Agnipurāṇa* 49.4, Smith (1969: 138-146).

18 Cf. *Nāradapurāṇa* 1.71.55, *Pārameśvarasaṃhitā* 23.46.

19 See the table of attributes in Nṛsiṃha images presented in Donaldson (1993 (2001): 125-126).

20 *vāmāṅkasthitayā laksmyāliṅgitaṃ.* "Embracing Lakṣmī staying to his left side."

21 *tasya kopaśāntyarthaṃ dakṣiṇavāmayoḥ śrībhūmyau nāradaṃ vīṇāhastinaṃ prahlādaṃ vandamāna bhakticarita. cendrādilokapālān vā vandamānāṃś ca kārayet /* "For the pacification of his fury, one should accomplish [with Nṛsiṃha image] Lakṣmī and Bhūmi to his right and left side, Nārada having *Vīṇā* in his hand, Prahlāda paying homage with devotion and *Lokapālas* such as Indra etc. paying homage to him."

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Desai (1973: 94) points out that the images of Lakṣmī-Nṛsiṃha are not to be found before 13th century CE. Donaldson (1993 (2001): 129) informs that most frequently, in Orissan art, we come across Yoga form of Nṛsiṃha seated in *utkuṭikāsana* accompanied by Lakṣmī seated on his *yogapaṭṭa*. He observes (p. 132):

"The majority of seated Nṛsiṃha images in Orissa, as indicated, have a small image of Lakṣmī seated on the *yoga-paṭṭa* above the left leg of the lion-headed deity and thus fall into the iconographic classification of Lakṣmī - Nṛsiṃha images. This is the most popular way in which Viṣṇu is represented with Lakṣmī in Orissan art."

This combination of features of Nṛsiṃha iconography is evidently visible in Śrīdhara's *maṅgala*.

The next attribute that calls for attention is *śeṣakroḍe vasāna*, i.e. Nṛsiṃha sitting in the lap of Śeṣa. The opening verse of chapter 9 expresses the presence of Śeṣa using another term *śeṣacchatra*.[22] Donaldson (1993(2001): 132) observes that the serpent-canopy appears only with Lakṣmī-Nārada images in Orissa.

Some of the minor attributes mentioned by Śrīdhara, add flavour to the iconographic composition. The attribute *himāṃśudhavala* in the first *maṅgala* verse or *śaraccandranibha* appearing in the opening verse of chapter 7, indicate that this god is as fair as Moon. This appears to be *Pāñcarātra* influence, for in *Pāñcarātra* texts, we come across the description of Nṛsiṃha's body colour as resembling the Moon.[23] Alternatively, Nṛsiṃha can also be compared with crystal[24] or a white mountain.[25] We should note that the *Pāñcarātra* texts invariably mention Nṛsiṃha having a red complexion when they wish to stress his wrathful form. It appears that the colour of Nṛsiṃha's garment also implies or adds to his fierce aspects. The *Viṣṇudharmottarapurāṇa* 3.78.2 mentions that Nṛsiṃha has a dark coloured garment (*nīlavāsas*). The *Pādmasaṃhitā* mentions a garment of red colour. In contrast with this, the yellow colour seems to imply his peaceful aspect,[26] and Śrīdhara in the opening verse of chapter 7 of the KP praises Nṛsiṃha precisely as having a yellow garment.

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22 This iconographic form is named as '*Chhatra-nārasiṃha*' in Rao (1990: 194).

23 Cf. Smith (1969: 143), citing *Iśvarasaṃhitā* 4.62 and *Parāśarasaṃhitā* 15.160.

24 Cf. Smith (1969: 140), citing *Pādmasaṃhitā* 17.24.

25 Cf. Smith (1969: 140, 143), citing *Viṣvaksenasaṃhitā* 11.60, *Viṣṇutantra* 17.3, *Pādmasaṃhitā* 31.257 etc.

26 Cf. Smith (1969: 139), citing *Sātvatasaṃhitā* 12.76, which mentions yellow colour garment.

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Thus, in his *maṅgala* verses, Śrīdhara presents interesting blend of hostile and pacific characteristics of Nṛsiṃha, culminating in an apparently unique iconographical composition. It is no wonder that we hardly find such images displaying both the aspects simultaneously.

Attributes of Nṛsiṃha in the *Paippalāda* Tradition

It seems quite certain that these attributes of Nṛsiṃha discussed above were quite well known in the *Paippalāda* tradition already before Śrīdhara, and do not emerge from the author's imagination alone. Already in various rites prescribed in the *Āṅgirasakalpa* mss.,[27] we come across the procedure of visualization of Nṛsiṃha and observe descriptions of Nṛsiṃha very similar to those found in Śrīdhara's work. Cf. the following *dhyāna* verses, from the *Ānuṣṭubhakalpamālā* and *Nṛsiṃhasya Sāmānyapūjāvidhi*:

satyajñānasukhasvarūpamamalaṃ kṣīrābdhimadhyasthale
yogārūḍham atiprasannavapuṣaṃ bhūṣāsahasrojjvalam /
tryakṣaṃ cakrapināsābhayavaraṃ bibhrāṇam arkacchaviṃ
chatrībhūtaphaṇīndram indudhavalaṃ lakṣmīnṛsiṃhaṃ bhajet //[28]

"One should praise the Lakṣmī-Nṛsiṃha, who is truth-knowledge-pleasure incarnate, pure, [residing] in the Milk ocean, steeped in *yoga*, having very pleasant body, shining in thousand ways due to decorations, three-eyed, with a wheel, a bow and *abhaya* and *vara* gestures, having the luster of Sun, having serpent-canopy, as white as Moon."

From the *Nṛsiṃhasya Sāmānyapūjāvidhi*:

aruṇakanakavarṇaṃ nīlakaṇṭhaṃ trinetraṃ
rathacaraṇapināsā 'bhītyabhīṣṭā 'grahastam /
amṛtalaharigauraṃ śeṣabhoge śayānaṃ
praṇamata śaśirūḍhaṃ yogarūḍhaṃ Nṛsiṃham //[29]

"You pay homage to Nṛsiṃha who is having the luster of Sun and gold, blue necked, three-eyed, front hands with a wheel, a bow and *abhaya* and *vara* gestures, as fair as Moonlight, relaxing on the Śeṣa, mounted on Moon,[30] steeped in *yoga*."

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27 Cf. Sanderson (2007: 230ff.) for the dating of the *Āṅgirasakalpa* corpus.

28 *Paippalādavaśādiṣatkarmapaddhati*, p. 155 (corrected); *Āṅgirasakalpa* ms. BORI 959/1887 91, f. 114r ll. 1-2. The verse is found again at p. 190 of the published *Paddhati*. The second occurrence of the verse cannot be traced in the BORI ms. The same verse with minor variations is found at *Parāśarasaṃhitā* 15.160 (cited by Smith (1969: 143)).

29 *Paippalādavaśādiṣatkarmapaddhati*, p. 190 (corrected). The verse is not traced in BORI 959/1887-91.

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Finally, a series of *dhyāna* verses from the *Mantrarājavidhāna* (*Paippalādavaśādi-ṣaṭkarmapaddhati*, p. 17-18), describes the abode of Nṛsiṃha in the Milk ocean, situated at the centre the great wheel and his seat on Śeṣa. Some of the same attributes are found in Śrīdhara's opening verse of chapter 9 with the phrase *mahācakrasya nābhisthaḥ Śeṣacchatraḥ*.

The verses from the *paddhati* are quoted below for comparison with the description of these and other attributes given by Śrīdhara:

mahācakrasya madhyasthe dhyāte dugdhapayonidheḥ /
śvetadvīpaṃ tato ratnaprāsādaṃ tatra saṃsmaret //
śvetasiṃhāsanaṃ tatra padme śeṣe ca saṃsmṛte /
yogarūḍhaṃ tadaṅgair vā tat pṛṣṭhe vā 'nuśāyinam //
tatphaṇāṃ sahasreṇa chatriṇāṃ nayanair yutam /
suprasannaṃ bhūrirūpaṃ cakraśārṅgaṃ varābhayam //
candribhir dadhataṃ dorbhiḥ sahasrārkojjvalaṃ sitaṃ /
vakṣogatamahālakṣmīṃ prekṣyamāṇaṃ muhur muhuḥ //
pītāmbaraṃ raktottaravastraṃ mantrī vicintayet /

"In the middle of the Great wheel, in the Milk ocean is a white island. One should think of a white palace there. Therein a white throne on which on a lotus after remembering a Śeṣa, a minister should meditate on [a lord], steeped in *yoga* with its limbs,[31] or is leaning on its back, canopied by its thousand hoods, enjoined with [three?] eyes, pleasant, multiple formed, [hands displaying] a wheel, a bow, *vara* and *abhaya* gestures, having hands of gold, lustrous like thousands of suns, white, looking again and again to Lakṣmī reclining on his chest, wearing yellow-coloured garment and red upper garment."

Conclusion

We may imagine that the Nṛsiṃha-iconography adopted by the Paippalādins, itself has been influenced by the socio-religious trends in Orissa. There is epigraphical evidence, which confirms that already in the 8th century CE, Viṣṇu was being worshipped in his Nṛsiṃha form

30 The attributes in this verse appear little strange. It seems some of the attributes of Śiva such as *Nīlakaṇṭha*, *trinetra* along with this *śaśirūdha*, showing association with the Moon, have been imposed on Nṛsiṃha.

31 I take here *yogarūḍhaṃ tadaṅgair* to mean that the lord has bound the body of the Serpent as his *yogapaṭṭa*.

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in Orissa. The Sirpur stone inscription (EI vol. 11, pp. 184-201) opens with the praise of Puruṣottama and goes on describing his manifestation as Nṛsiṃha. Due to the influence of Tantrism between the tenth and twelfth centuries, Nṛsiṃha came to enjoy elevated importance in the *Vaiṣṇava* cult where any such deity having fierce form resembling to Tantric deities was absent. Tripathi (1978: 44) opines on the emergence of Nṛsiṃha as a tantric deity in following manner:

"There was nothing similar to these '*ugra*' Tantric deities in the *Vaiṣṇava*-Bhāgavatism which is based on the intense emotional dedication (*bhakti*) of an individual to the highest personal God (*Bhagavat*) with a view to attaining final liberation. The strong influence of the Tantric ideas, however, led Viṣṇuism to develop the concept of Narasiṃha--originally only an incarnation of Viṣṇu--to an independent deity with furious character who destroys the evils and the dangers befalling his worshipper and grants him immediately worldly benefits. Nṛsiṃha, in other words, is a Viṣṇuite version of the Tantric practice of the worship of the furious deities."

This Tantric deity having widespread importance in Orissa, might have been then adopted by the *Paippalādin Atharvavedin* priests, hired by the kings to carry out hostile practices in warding off and winning over their enemies through hostile worship of this furious god. The image of Nṛsiṃha killing ruthlessly his enemy Hiraṇyakaśipu, would have been of great inspiration in such practices. Thus, a number of such practices centre around Nṛsiṃha.[32] In *Paippalādavaśādiṣaṭkarmapaddhati*, we come across various *dhyānamantras* of Nṛsiṃha, which mark the existence of Hiraṇyakaśipu, with the term *ari*.[33] There is every possibility that Nṛsiṃha-worship forming an essential feature of *Paippalāda* hostile practices, then got significant importance in the domestic worships of these priests, so much so that later on the god was considered to be *iṣṭadevatā*.

For Śrīdhara, writing his treatise on domestic rituals, it was necessary to emphasize the peaceful character of Nṛsiṃha, although without completely discarding his furious form well-known in the tradition. This seems to be the reason why he combined both the aspects in his verses at one and the same time.

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32 For the centrality of Nṛsiṃha in the *Āṅgirasakalpa* corpus, cf. Sanderson (2007: 226ff.).

33 Cf. pp. 23, 29, 32, 166, 201-202.

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THE *BHRAMARAGĪTĀ* OF BREHEDEVAKAVI FROM GUJARAT

Milind S. Joshi*

Introductory-

The *Bhāgavatapurāṇam* is a great store house of religious, philosophical, historical and political information of ancient India. The Purāṇas, embodying all branches of knowledge as they do, occupy a special position in the history of Indian literature. The Purāṇas are a great store house of Indian culture and civilization. It is an important branch of literature, worth reading by all sects of people. In this connection, we may refer to our old texts, which place the *Purāṇa*s in a high position. The *Chāndogyopaniṣad* has placed the Purāṇas along with the *Itihāsa* on a par with the Vedas by declaring *Itihāsa – Purāṇa* as the fifth *Veda* and also has named the *Itihāsa – Purāṇa* in the beginning of the list of the fourteen branches of knowledge.[1] The *Bhāgavatapurāṇam* also mentions *Itihāsa – Purāṇa* as the fifth Veda.[2] It is stated in the *Mahābhārata* that one should magnify the Vedas (i.e. Vedic knowledge) with *Itihāsa* and *Purāṇa* (i.e. by the knowledge thereof) इतिहासपुराणाभ्यां वेदं समुपबृंहयेत् । बिभेत्यल्पश्रुताद् वेदो मामयं प्रतरिष्यति ।।[3]

The *Bhāgavatapurāṇam* and Gujarati literature -

Like the *Rāmāyaṇa* and the *Mahābhārata*, the *Bhāgavatapurāṇam* (Bh. P.) is also an unfailing source from which the poets of Gujarat derive inspiration. Though the *Rāmāyaṇa* and the *Mahābhārata* also serve as the store-house for poets and artists, the *Bhāgavatapurāṇam* has excelled both of them in this respect.

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1 इतिहासपुराणं पञ्चमम् ।। छान्दोग्योपनिषद्- ७/१/२।।

2 भागवतपुराणम् १/४/२०।।

3 महाभारतम् आदिपर्व - १/१/२७३।।

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In Gujarati literature twenty-two (22), *Bhramaragītās* are found so far from the manuscripts of different areas, though eight of them are very famous: (1) Chaturbhuja (Saṁ. 1576, 1519 A.D.), (2) Brehedeva (Saṁ. 1609, 1552 A.D.), (3) Premānanda (Saṁ. 1701, 1644 A.D.), (4) Viśvanātha Jānī (Saṁ. 1715, 1658 A.D.) (5) Puruṣottama (Saṁ. 1775, 1718 A.D.), (6) Sundarasuta (Saṁ. 1780, 1723), (7) Dayārāma (Saṁ. 1850, 1793 A.D.) and (8) Govindarāma. All of them find their sources in the conversation of Uddhava and Gopīs in the *Bhāgavatapurāṇam*, 10th *skandha* and 47th *adhyāya*.

About the poet-

Brehedeva flourished in the 1552 A.D. His father's name was Mahīdāsa. Brehedeva was a merchant, belonging to *Vaiṣṇava* caste. His verses prove that he had good-knowledge of Sanskrit. Śrī Vallabhācārya visited Gujarat for three times and his last visit of Gujarat was in Saṁ. 1585 (1538 A.D.), it was the time when there were many scholars like Rāṇā Vyāsa etc. We can clearly see their deep impact in his *Bhramaragītā*. So we are able to justify his time which must be latter than Śrī Vallabhācārya. He is considered as the best among the poets who composed the *Bhramaragītās*. He has mentioned the date of composition of *Bhramaragītā* along with his father's name at the end of 40th song (*kaḍavu*). The Guajarati *Kaḍavu* (song) is very much near to *Āryā* metre (12/18/12/15).[4]

संवत सोल शत नव, वैशाख सुदि एकादशी ।
कह्युं सोमवारि ग्रन्थ सुप्युं, हरि-कथा माहारिमन्य वशी ।। ४०/५।।
महीदास-सुत-ब्रिहिदे केहि ? कृष्णजीई कहावीअुं ते में कह्युं ।। ४०/६।।

His Works –

He has composed the following works.

(१) अगुपुस्तक, (२) नकादोहन, (३) नरसिंह महेतानां पद (प्र. हरि लक्ष्मण शेटे, १८६६), (४) प्राकामञ्जरी, (५) बृकादोहन, (६) भ्रमरगीता (सं. मंजुलाल र. मजमुदार, १९६४).

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4 यस्याः प्रथमे पादे द्वादशमात्रास्तथा तृतीयेऽपि ।
अष्टादश द्वितीये चतुर्थके पञ्चदश साऽऽर्या ।।

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About the *Bhramaragītā* -

The *Bhāgavatapurāṇam* contains the episode of *Bhramaragītā* in 47th *Adhyāya* of the *Daśamaskandha* in 13 verses only. Brehedeva has narrated it in a very poetic manner in 40 *Kaḍavas* (songs) with 289 *kaḍi*s (verses) and 11 *Pada*s (poems) with 45 *kaḍi*s (verses), where he uses 12 types of *rāga*s. He has mentioned the number of songs (*kaḍavu*), poems (*pada*) and *rāga*s at the end of the 11th poem (*pada*).

कह्युं बिसि त्र्याहाशी पद बार राग, मूक्यां गीत एकादश जोई माग ।
च्यालीशे कडवे समा भाग, फल जोतां ब्रिहिदे कहे कोटि याग ।।११/३।।

This clearly points out that he has enlarged the theme with his own ability. He begins with *maṅgalācaraṇa* and salutation to Śyāma i.e. Lord Śrīkṛṣṇa, Gaṇeśa, Pārvatī and Sarasvatī.

प्रभु, तमने जाचू करनई प्रणामजी,
मोरई मुख आवउ सुन्दर-श्यामजी ।
आशा घणी छई मुजनि तुमारीजी,
रसना रमउ जीमुकुन्द मोरारिजी ।। पद-१/२।।

हिम-सुता-सुत-चरणि लागुजी,
कमल-भू-तनया वाणी मागुजी ।
भ्रमर-गीता-ई भावि जाचुजी,
ब्रेदेव कहि हरि आपने मुने साचुजी ।। पद-१/२।।

- In the 1st song (*kaḍavu*) the poet writes -

भ्रमरनिज ग्यांन देईनि प्रछवउ, व्रजनार दु:ख आंणई रखे ।

Here he explains the word *Vrajanāra* from *Vraj* -to move or to roam. By nature, the Gopīs also like to move or to roam. Lord Kṛṣṇa sends message to Gopīs through Uddhava who was able to explain Kṛṣṇa's nature and form properly as he was close to Kṛṣṇa and had enough wit to convince the Gopīs because of his being the disciple of Bṛhaspati.

- In the 3rd poem (*Pada*) Brehedeva nicely expresses the episode of *Bhramara*.

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हरिनी मांननीअे मधुकर नयणे निरख्युं ।
हरिना दूत विना नहि को हरि-सरख्युं ।। पद-३/१।।
हरिने सेवि ते हरि-सरखा होई ।
रखे मन अंतर आंणउ कोई ।। पद-३/२।।

He says by these lines "O bee ! O Friend of the weary, do not touch our feet with your beard besmeared, because your impure foot has been coloured with the pollen of the flowers pressed against the breasts of our co-wife Lakṣmī ." As a messenger of Lord Kṛṣṇa, do not try to deviate us by bowing down. Here the poet says that Lord Kṛṣṇa's messenger is like Kṛṣṇa himself. He uses the word *Madhukara* for a bee. This can be compared with *Bhāgavatapurāṇam* (10/47/12).

मधुप कितवबन्धो मा स्पृशाङ्घ्रिं सपत्न्याः
कुचविलुलितमालाकुङ्कुमश्मश्रुभिर्नः।
वहतु मधुपतिस्तन्मानिनीनां प्रसादं
यदुवयसि विडम्ब्यं यस्य दूतस्त्वमीदृक् ।। भा.पु.१०/४७/१२।।

• In seven verses (*kaḍis*) of 11th song (*kaḍavu*), he expresses the episode of Gopī, who speaks to Uddhava. This can be compared with *Bhāgavatapurāṇam* (10/47/17).

प्रेमि पीडी बोलि विरहिणी,
जनुं नी इणि अेहेनी हाथि हणी ।। कडवुं-११/१।।
हत्या ना गणी मन माता-तणी,
आपण ऊगर्यां ते पूर्वे पुन्यई भणी ।। कडवुं-११/२।।

Brehedeva says – "what is the use of such a friend, whose actions are not consistent with his words, how can we be friends to such one whose actions are the very antithesis, of his words of love and sympathy. Like a cunning hunter, he killed Vāli in the incarnation of Rāma and at the instance of his wife Sītā, he disfigured a pretty woman, who came to him with amorous designs. In the incarnation of Vāmana, he bound king Bali, was not this action, crow like cunning of him. We know enough of his roguery as a friend." Brehedeva adds the story of Paraśurāma, which is not in *Bhāgavatapurāṇam* 10/47/17.

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मृगमयुरिव कपीन्द्रं विव्यधे लुब्धधर्मा
स्त्रियमकृत विरूपां स्त्रीजितः कामयानाम् ।
बलिमपि बलिमत्त्वावेष्टयद् ध्वाङ्क्षवद्
यस्तदलमसितसख्यैर्दुस्त्यजस्तत्कथार्थः ।। भा.पु.१०/४७/१७।।

- In 3rd verse (*kaḍi*) of 13th song (*kaḍavu*), he narrates the story of Lakṣmī. This can be compared with *Bhāgavatapurāṇam* (10/47/20).

ठरि सुंदर नार्य-शुं , आहिरडां ते क्यम गमि ?
रमा सरखी हृदे लई ने, दिवस तेंह-शुं नीगमि ।। १३/३।।

Poet says – "O friend of my beloved, have you come here again as directed by Him? You are our esteemed guest. Well, ask whatever you long for. Why are you making efforts to take us to the Inseparable One?" His queen-consort Lakṣmī always remains in His heart.

प्रियसख पुनरागाः प्रेयसा प्रेषितः किं
वरय किमनुरुन्धे माननीयोऽसि मेऽङ्ग ।
नयसि कथमिहास्मान् दुस्त्यजद्वन्द्वपार्श्वं
शततमुरसि सौम्य श्रीर्वधूः साकमास्ते ।। भा.पु.१०/४७/२०।।

Early in the morning Gopīs have seen golden chariot of Uddhava and also saw Nanda and Yaśodā weeping. Uddhava has come with the message of Kṛṣṇa, and he was to talk about dry spiritual knowledge. Gopīs are very smart. They immediately understood Uddhava's talking about spiritual knowledge of *Vedānta*. They expressed their emotions by using satirical words and say, "his talk is like salt on the wound" and thus they asked him not to talk about that knowledge.

In 5 to 14 songs (*kaḍavu*) poet fully deals with what Uddhava tells about the principles of *Vedānta*. Gopīs try to change Uddhava's mind from knowledge of Kṛṣṇa's nature, his *Rāsa-līlā*, his pure and extra-ordinary love. Gopīs do not express their passion of extra ordinary love directly. They tell their own feelings by the symbol of *Bhramara* i.e. the Black bee. The path of love is awkward and Kṛṣṇa is the form of love, so the Gopīs indirectly express their love and affection for Kṛṣṇa indicating the cuckoo, the snake and the bee. They also talk about the divine miracles which were done in the incarnations of Rāma and Paraśurāma.

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Hearing all these divine miracles, hearts of Gopīs are filled with joy. By hearing the conversation of Gopīs, Uddhava realized their feelings and his heart was melted. Tears started flowing from his eyes. Though his heart was melted, he was overcome by the knowledge of *Vedānta*.

In 15 to 20 songs (*kaḍavu*), poet fully deals with *Brahmavāda* related with *Jagat* (world), *Jīva* and *Paramātmā*. But the hearts of Gopīs are full of love for Kṛṣṇa. The Vedantic talk of Uddhava does not make any impact on Gopīs' hearts. On the contrary, Gopīs did not give attention to *Yoga*, *Saṃnyāsa* and *Mokṣa*, they drew Uddhava and showed him the places of Kṛṣṇa's divine miracles. They also made him aware of Kṛṣṇa's love for them. Thus Gopīs described the history of Kṛṣṇa in the 10th *skandha*, 5 to 32 *adhyāyas*.

The poet describes in the colophon of the last poem (*pada*) that the *Bhramaragītā* will destroy all the sins of *Jīva* and will free him from the bondage of this ocean like world. He adds that the recitation of the *Bhramaragītā* will bestow the fruits which can be attained by performing hundreds of *Yajñas*.

फल जोतां ब्रिहिदे कहे कोटि याग ।। ११/३।।

He also says that one will enjoy the condition as if he is a resident of *Vraja* by chanting of this *Bhramaragītā*. Thus he emphasizes on the *Bhakti Mārga* like other sects.

Conclusion:

1. Poet wants to say that the main aspect of *Bhramaragītā* is fully related with *Bhāgavatapurāṇam* (10/47/12-23).

2. The poems (*kaḍavas*) are to be sung in different regional *ragas*. They are also mentioned in the text – धन्याश्री, वैराटी (वैराडी), मारुणी, गौडी, सांमेरी, रामग्री, सारंग, केदार, मेवाड and वसंत. All narratives were *geya*.

3. Language of the *Bhramaragītā* is simple, sweet and can be sung easily.

4. Here we find some words of Sanskrit and regional language, e.g.-

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Sanskrit : (1) हिम (mountain Himālaya), (2) सुता (a daughter), (3) सुत (a son), (4) कमल (a lotus), (5) तरु (a tree), (6) ब्रजपति (Lord Kṛṣṇa), (7) मधुकर (a bee), etc.
Regional : (1) मोरई (my), (2) आंणई (to bring), (3) संभरई (remember), (4) कांहां (where), (5) आंगणई (courtyard), (6) विसरी (forget), etc.

5. In the composition of the *Bhramaragītā*, the poet does not follow the sequence of verses of *Bhāgavatapurāṇam*.

6. This poem is neither a translation in Gujarati nor explanation, because the verses of the *Bhāgavatapurāṇam* are rendered in 334 verses (*Kaḍīs*).

7. Poet adds many stories in the *Bhramaragītā* like: वत्सासुर, बकासुर, अघासुर, ब्रह्म-मोहन-लीला, धेनुकवध, कालिय-मर्दन, दावानलपान, गिरिराजधरणलीला, नंदमुक्ति, etc.

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THE MAKERS, DESIGNERS AND PATRONS OF SANSKRIT ASTRONOMICAL INSTRUMENTS - AN ALPHABETICAL DIRECTORY OF NAMES AND RELATED INSCRIPTIONS

Sreeramula Rajeswara Sarma*

1 Introduction

1.1.1 Indian art is generally anonymous. It is rarely that an artist puts his signature on his creation, be it a stone sculpture, a metal image or a mural painting. We do not know who fashioned the voluptuous figure of the so-called Didarganj Yakṣī which is now in the Patna Museum, or who sculpted the serene icon of the seated Buddha in the *Dharmacakra-pravartana-mudrā* in the Sarnath Museum, who cast the colossal 2.3 m copper statue of the standing Buddha which was found in Sultanganj and which is now in the Birmingham Museum in UK, or who painted all the marvellous frescos in the Ajanta Caves. If at all these art objects carry an inscription, it refers to the object of representation (as on the Yakṣī sculptures at Barhut) or to the donor (as in the case of the massive Bodhisattva image now at Sarnath which was commissioned and donated by the Friar Bala). It is rarer still that the creator of minor art forms such as metal artefacts signs his name on his production.

1.1.2 In the Islamic world, however, it was customary that metal workers put their names on their productions. In this connection Kjeld von Folsach observes as follows:

There is no doubt that metalwork enjoyed great respect in the Muslim world. Precious metals were costly, and in all circumstances metal-working demanded great knowledge and skill. Many prestigious items are preserved with the names and full titles of princes and nobles, and even on more modest pieces one finds-more often than in other groups of objects-the owner's name engraved either at the time of making or in the form of *Wakf* inscriptions added at a later date, when the item was handed over to a particular institution

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Abbreviations used: PC = private collection, PLU = present location unknown; S.V. = sub voce (see under the word mentioned, for the major entry), VS = *Vikrama Saṃvat*.

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for all time. Except for the art of the book it is also in the field of metalwork that most artists' names have been recorded, and in that of scientific instruments we nearly always know the name of the maker... In a civilization and period in which few sources exist that throw light on art and artists, signed, dated and located works of art are of great importance to research. These works of art provide the framework for what would otherwise be attributions based predominantly on stylistic features.'[1]

1.1.3 This custom is followed invariably in the case of astronomical instruments made of metal, especially astrolabes and celestial globes. Thus the earliest surviving astrolabe produced in the Islamic world in 927 A.D., bears the name of the instrument maker Nasṭūlus.[2] Likewise the earliest extant celestial globe manufactured in the Islamic world, carries the names of Ibrāhīm ibn Sa'īd al-Sahlī al-Wazzān and his son Muḥammad who produced this globe in Moorish Spain in AH 473 or 478 (= A.D. 1080 or 1085).[3] On the basis of the inscriptions containing the makers' names, scholars have been able to trace the history of instrument making in the Islamic world and in Europe.

1.2.1 In India, various kinds of astronomical instruments were produced and used before the advent of Muslims. But, no actual specimens of these survive today; therefore it is not possible to say whether there existed a custom of writing the names of instrument makers on the instruments. With the introduction of the astrolabes and celestial globes into India,[4]

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1 Kjeld von Folsach, *Islamic Art: The David Collection*, Copenhagen 1990, p. 183. This collection, for example, holds a twelfth-century inkwell of cast bronze inlaid with silver and copper which carries the inscription 'made by Shah Malik' (pp. 194-195, No. 320) and an exquisitely crafted jug of cast brass with inlaid silver and gold on which was engraved the name of the maker 'Alî ibn Muḥammad 'Alī Shahāb al-Ghurī and the year AH 918 (=AD 1512) (p. 207, No. 347.)

2 It is preserved today in the Islamic Archaeological Museum, Kuwait. For a description and illustrations of this astrolabe, cf. David A. King, 'Early Islamic Astronomical Instruments in Kuwaiti Collections' in: Arlene Fullerton & Géza Fehérvári. *Kuwait: Arts and Architecture: A Collections of Essays*, Kuwait 1995, pp. 76-96.

3 It is with the Museum of History of Science at Florence. For a description of this globe, cf. Emilie Savage-Smith, *Islamicate Celestial Globes: Their History, Construction and Use*, Washington, D.C., 1985, p. 271.

4 On this, see Sreeramula Rajeswara Sarma, 'Sultān, Sūri and the Astrolabe,' *Indian Journal of History of Science*, 35.2 (2000) 129-147; reprinted in: idem, *The Archaic and the Exotic: Studies in the History of Indian Astronomical Instruments*, New Delhi 2008, pp. 179-198; idem, 'From al-Kura to Bhagola: On the Dissemination of the Celestial Globe in India,' *Studies in History of Medicine and Science*, 13.1 (1994) 69-85; reprinted in: idem, *The Archaic and the Exotic, op. cit.*, pp. 275-293.

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there came also the custom of engraving on them the names of makers. Thus a great majority of surviving Indian astronomical instruments contain the names of the instrument makers, sometimes accompanied by the names of their fathers and other ancestors. With the help of these names, a history of instrument making in India, can also be traced.

1.2.2 For several years, I have been surveying the extant Indian astronomical instruments and have identified so far nearly 450 specimens preserved in museums and private collections in India, Europe and North America.[5] These instruments can be broadly classified into two groups: those with numerals, legends and inscriptions in Arabic/Persian and those with the same in Sanskrit. The former are known as Indo-Persian instruments[6] and the latter as Sanskrit instruments. A study of the inscriptions on the Indo-Persian instruments, shows that most of these were produced during the sixteenth and seventeenth centuries by the members of a single family from Lahore, who were patronized by the Mughal nobility.[7]

1.3.1 Some 200 of the extant specimens are Sanskrit astronomical instruments, carrying various types of inscriptions. As measuring instruments, they contain scales, the divisions of which are labelled with Devanāgarī numerals. Then there are legends mentioning the Sanskrit names of certain lines, circles, and also of zodiac signs, star constellations and individual stars.

1.3.2 In addition to these numbers and legends, some instruments contain inscriptions which provide information about their makers, the designers who prepared the technical drawings, patrons or owners who commissioned or owned instruments. It is with such inscriptions that we are concerned here. Since no other records are available about the actual manufacture of astronomical instruments, these inscriptions are valuable documents for reconstructing the history of the production of astronomical instruments in India.

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5 On this project, see Sreeramula Rajeswara Sarma, 'Indian Astronomical and Time-Measuring Instruments: A Catalogue in Preparation,' *Indian Journal of History of Science,* 29.4 (1994) 507-528; reprinted in: idem, *The Archaic and the Exotic, op. cit.*, pp. 19-46.

6 Not because there is any Persian influence on them, but because they were produced in the Indo-Persian milieu, that is to say, by people who used Persian as the academic language in India.

7 Sreeramula Rajeswara Sarma, 'The Lahore Family of Astrolabists and their Ouvrage,' *Studies in History of Medicine and Science,* 13.2 (1994) 205-224; reprinted in: idem, *The Archaic and the Exotic, op. cit.*, pp. 199-222.

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Therefore the full texts of such inscriptions on all the known Sanskrit astronomical instruments will be reproduced in the following pages. With the exception of a few, all the inscriptions have been deciphered and translated by me and collected here for the first time.

1.3.3 The inscriptions are arranged according to the names of the makers, designers and patrons mentioned therein. When there is more than one name in an inscription, the main entry with the inscription will be under the name of the maker or the designer. The names are arranged in Sanskrit alphabetical order. Like many manuscripts, these inscriptions also generally avoid the *parasavarṇa* and employ instead *anusvāras,* which have been retained here as in the original. For the sake of clarity, *avagrahas* have been added silently.

Each inscription will be followed by a translation in English and the details about the instrument on which the inscription is engraved, such as its dimensions and the present location. It is the general convention not to identify the private collectors possessing the instruments. In such cases, the location is indicated as 'PC', meaning private collection. Years without any label, are the years of the Christian era. Dates in other eras are converted into modern Gregorian dates with the help of the online *Pañcāṅga* programme, designed by Professor Michio Yano of Kyoto Sangyo University.[8] There will be comments explaining the purport of the inscriptions or drawing attention to some peculiar features. However, this index will not go into the technical aspects of the instruments and their functions.

1.3.4 In the Islamic world and also among the Muslims of India, making scientific instruments, especially astrolabes, was a highly specialized and respected profession, for these astrolabe makers were not merely brass workers, but also scholars well-versed in astronomy, trigonometry and the theory of instruments. In most cases, the same person prepared the technical design and then produced the instrument in metal according to the design. Among the Hindus, however, the technical design was first prepared and drawn on paper by an astronomer, who was usually a Brahmin, and the instrument was then prepared according to the design by an artisan of a lower caste. When an artisan specializes in a particular trade, he passes on his skills to his descendants. Thus families begin to specialize in a particular product. But instrument making does not seem to have become such a specialized profession among the Hindus.

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8 http://www.cc.kyoto-su.ac.jp/~yanom/pancanga/index.html

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1.3.5 Though *Jyotiḥśāstra* or the astral science was cultivated and thousands of texts were composed on various branches of the *śāstra* throughout India, it is intriguing that the extant Sanskrit astronomical instruments do not emanate from all parts of India, but only from a small segment of the Indian subcontinent comprising the present states of Gujarat, Rajasthan and Punjab. I am unable to explain this anomaly satisfactorily. The places of production which are mentioned in the inscriptions (or which can be assumed from other evidence) are Ahmedabad, Bhuj, Bundi, Jaipur, Jodhpur, Kota, Kuchaman, Lahore, Patiala and Tonk. From this, it becomes quite clear that in the eighteenth century, not only Sawai Jai Singh was interested in astronomical instruments but several other rulers—of Bundi, Jodhpur, Kota, Kuchaman, Patiala— either commissioned instruments or extended their patronage to instrument makers.

In particular, the city of Kuchaman in the Nagaur district of Rajasthan, deserves notice. It is situated some 130 km west of Jaipur and lies on almost the same latitude (Jaipur 26;55° N, 75;49° E. Kuchaman 27;8° N; 74;50° E). We know of four astrolabes fabricated at Kuchaman by the master artisan Laksmīnārāyaṇa (s.v.) between 1883 and 1903. Two of these astrolabes were designed by the astronomer Jayakṛṣṇadāsa, not for himself, but for another astronomer named Acaleśvara. The two others were designed by Jayakṛṣṇadāsa's son Haridatta. Only one of these four has multiple plates; the other three have single plates calibrated for the latitude of 27°, which can be used at Kuchaman, Jaipur or Agra. Thus this city Kuchaman appears to have had a family of astronomers who could design astrolabes, artisans to fabricate them and also clients to use them, well into the beginning of the twentieth century. There are extant dozens of single plate Sanskrit astrolabes calibrated to the latitude of 27° but without any information engraved on them about the maker or the year of production. Some of these may have been produced in Kuchaman and not necessarily in Jaipur.

1.3.6 The instruments represented here are mainly astrolabes (*yantrarāja*), but there are isolated specimens also of other types like the celestial globe (*bhagola-yantra*), *dhruvabhrama-yantra*, horizontal sundial with triangular gnomon (*palabhā-yantra*), quadrant (*turīya-yantra*), column dial (*cābuka-yantra*) and a variety of quadrant known as the *yantra-cintāmaṇi*.

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1.3.7 These Sanskrit inscriptions were composed by the Brahmin astronomers who designed the instruments. The quality of Sanskrit, however, is not always uniform. While some inscriptions are in correct Sanskrit, others are in 'popular' Sanskrit without proper case-endings or with an admixture of Old Gujarati or other vernaculars. Interestingly enough, some of the inscriptions are in verse form. Chronologically, Sawai Madho Singh of Jaipur seems to be the first to sign his instruments in verses. Whether it is due to his influence, or whether the fashion was in the air, many instrument designers of Rajasthan and also of Punjab added metrical signatures to their instruments. These are the following: Sawai Madho Singh of Jaipur (r. 1750-67), Nandarāma Miśra of Kāmyakavana in the Braj region (1767), Motilāla (1785) Gaṅgāsahāya of Tonk (1795), Rāmanātha of Kota (1827), Mannālala of Jaipur (ca. 1850), Vaijanātha's son of Kota (1834), Bhālūmal of Lahore (1839-50), and Gaṅgāsahāya Śiśuka of Bundi (1870). These metrical inscriptions express the years of manufacture in the word numerals.

1.3.8 The Brahmin astronomers who designed the astrolabes use occasionally the titles *jyotirvid* ('one who knows [the science of] the luminaries'), *daivajña* ('one who knows the destiny') or simply *jośī* (from Sanskrit **jyotiṣī*, 'astronomer/astrologer'). The artisans are occasionally referred to as *Śilpin* ('one who practices a craft'). In three cases, persons are mentioned, not by their own names, but as the sons of *x*. Thus a certain Gaṅgāsahāya (s.v.) is known from an interesting astrolabe he designed and caused to be made at Tonk in Rajasthan in 1795. Seventy-five years later another astronomer designed an astrolabe of huge proportions and got it produced at Bundi, also in Rajasthan, precisely on 25 December 1870 to coincide with the birthday of Rāmasiṁha, the ruling prince of Bundi. Now this second astronomer calls himself Gaṅgāsahāya-śiśuka (s.v.), 'the child of Gaṅgāsahāya'. He must indeed be the son of the Gaṅgāsahāya mentioned above and may have reached a ripe old age in 1870. Yet, it is not clear why he does not mention his own name but calls himself merely 'the child of Gaṅgāsahāya'. There are three other such cases. The Adler Planetarium at Chicago possesses a Sanskrit astrolabe, produced by *Jyotirvid* Hṛṣīkeśa (s.v.) for Caṇḍīdatta's son. Another Hṛṣīkeśa (s.v.), also with the title *Jyotirvid*, of Kumaon, seems to have caused the engraving of Sanskrit legends on what was originally an Arabic astrolabe, for the sake of 'Bālādatta's son'. Finally a certain Vaijanātha's son engraved a silver quadrant at Kota in Rajasthan in 1834. It is rather intriguing that in these cases, the astronomers preferred to be known as the sons of their fathers and not by their real names.

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1.3.9 The script used in all the instruments is Devanāgarī. There is, however, an important exception. In 1850, Narinder Singh, the *Mahārājā* of Patiala, commissioned an astrolabe which was designed by the astronomer Rishīkesh (s.v.) and made by the artisan Rahīm Bakhsh. The script used on this instrument is Gurumukhī and the language is Punjābī.[9] Two other astronomical instruments with Gurumukhī engravings are known, but they do not carry any date or name. Obviously they too were produced in the same milieu about the same time.

1.3.10 After these introductory remarks, I present below a directory (arranged in the order of the Sanskrit alphabet) of the names of the makers, designers and patrons of Sanskrit astronomical instruments together with the related inscriptions. These names, connected with the design and production of Sanskrit astronomical instruments, deserve a place in the history of science and technology of India.

2 Alphabetical Directory

Acaleśvara, son of *Paṃ[ḍita] Jyotirvid Audīcya* **Mahādeva**, of Kuchaman, owner of two astrolabes made by **Lakṣmīnārāyaṇa** (s.v.) in 1887 and 1902.

Ānandīlāla assisted **Gaṅgāsahāya Śiśuka** (s.v.) in designing a very large astrolabe in 1870.

Indrajī, Jośī, owner of an astrolabe dated vs 1730/AD 1673, one of the earliest extant Sanskrit astrolabes. Pitt Rivers Museum, Oxford, diameter 115 mm.[10] Inscription on the back of the crown:

jośi iṃdrajīkasya yaṃtraṃ
saṃvat 1730 varṣa kārtika śudi 6 bhau

'The instrument (i.e. astrolabe) of Jośī Indrajī, [made] on the sixth day of the bright half of *Kārtika* of the *Saṃvat* year 1730, *Bhau[mavāra]*' (= Tuesday, 17 October 1673).

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9 Discussed and illustrated in: Sreeramula Rajeswara Sarma, 'Indian Astronomical Instruments in German Collections,' XXX. Deutscher Orientalistentag, Freiburg, 24.-28. September 2007. Ausgewählte Vorträge, hrsg. im Auftrag der DMG von Rainer Brunner et al. Online-Publikation, February 2008. http://orient.ruf.uni-freiburg.de/dotpub/sarma.pdf.

10 Robert T. Gunther, 'Oriental Astrolabes' in: idem, *Early Science in Oxford*, vol. II: Astronomy, Oxford 1923, pp. 187-199; idem, *Astrolabes of the World*, Oxford 1932, reprint: London 1976, vol. 1, No. 79, p. 211, fig. 10.

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Kalyāṇa, son of **Jagatārasiṃha** of *Girinārāyaṇa-jñāti*, appears to have prepared an astrolabe for **Puruṣottama** in vs 1699 (= AD 1642). Notes and an outline diagram in the archives of the Museum of the History of Science, Oxford. PLU.

Kastūrīcandra instructed **Sūryamalla** (s.v) about the production of an astrolabe.

Kiśorasiṃha, ruler of Kota from 1817-1827 and patron of **Rāmanātha** *Jyotirvid* (s.v.) who made a *dhruvabhrama-yantra* in 1827.

Kīrticandra, ruler of an unidentified kingdom in Rajasthan, for whom **Motilāla** (s.v.) made a *dhruvabhrama-yantra* in 1785.

Keśarīsiṃha, Rao Bahadur, the ruler of Kuchaman during whose reign an astrolabe was designed by **Haridatta**, son of *Jyotirvid* **Jayakṛṣṇa,** and made by Ustāda **Lakṣmīnārāyaṇa** (s.v.) in 1883, and who commissioned a diptych dial by *Jośī* **Rāmacandra** (s.v.) in February/ March 1885. Instruments continued to be made during the reign of Keśarīsiṃha's son and successor **Serasiṃha** (Sher Singh) (s.v.) also.

Keuji Ācārya, Bikaner, probably owned an astrolabe, at the back of which his name was scratched, Single plate for latitude 28°, 20 star pointers, d. 206. At the back only the sine-cosine grid is engraved on the top quadrant. The remaining three quadrants are blank. (Photographs in the archives of the Museum of the History of Science, Oxford).

Gaṅgāsahāya caused an astrolabe to be made by **Rāmapratāpa** at Tonk (26;11°N; 75;50° E, Rajasthan) in vs 1852/AD 1795. PLU. Photographs in the archives of the Museum of the History of Science, Oxford. Single plate for the latitude 26°N, diameter 334 mm. Several inscriptions can be read from the photographs.

On the obverse side of the crown:

śrībundi-prthvīśvara-satkṛto yaḥ
śrītātapādārcanalabdhavidyaḥ ।
gaṃgāsahāyo 'racayat sayatnaṃ
rāmapratāpābhidaśilpinādaḥ ॥॥ [metre: *Indravajrā*]
Saṃvat 1852.

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'Gaṅgāsahāya, who was honoured by the glorious king of Bundi, and who received [all] the sciences through the worship of [his] father's feet, [caused to be] constructed this [astrolabe] with [great] effort through the artisan named Rāmapratāpa. vs 1852.'

Below the rete, partly obscured by it:

ṭākanagare palabhā 5/54

'kṣāṃśāḥ 26 pala[karṇa]

'In the city of Ṭāka [Tonk] the latitude degrees are 26; equinoctial shadow 5154, equinoctial [hypotenuse ...].'

On the lower rim of the rete:

idaṃ patraṃ bhacakrapatraṃ । asya madhye tu

rāśicakrayutaṃ krāntimaṇḍalaṃ ।

asmin patre siddhāntānusārāṃṇy eva nakṣatrāṇi.

'This plate [is called] the plate of the stellar sphere (*bhacakrapatra*). In it is [engraved or situated] the ecliptic ring (*krāntimaṇḍala*) together with the circle of the zodiac (*rāśicakra*). On this plate the star positions are [marked] strictly according to the *siddhāntas* (i.e. Sanskrit astronomical tradition).'

The projections on the back are unusual. An inscription on the crown states that

cakra-turīya-phalaka-yantrāṇām ekatra samāveśaḥ.

'[Here are] assembled at one place the *cakra-yantra,* the quadrant (*turīya-yantra*), and the *phalaka-yantra.*'

Upper left quadrant reads:

ṭoṃkanagare

phalaka-yantra-yogya ।

paramā yaṣṭiḥ 36/34.

'In the city of Tonk, the maximum altitude (*paramayaṣṭiḥ*) appropriate for the *phalaka-yantra* is 36/34.'

Upper right quadrant

phalaka-yantra

carajyā-khaṇḍāḥ

3/2/2

6/18/2.

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'Accensional differences for the *phalaka-yantra* are 3/2/2 and 6/18/2.'

It is interesting to note that there are projections of *turīya-yantra, cakra-yantra* and *phalaka-yantra* on the back of this astrolabe. A *turīya-yantra* (i.e. a quadrant) is normally incorporated on the back of the astrolabe for measuring the altitudes of the heavenly bodies. The back of the astrolabe can also function as the *cakra-yantra*, which is a graduated circle with an upright peg at the centre.[11] But a *phalaka-yantra* is not a part of the astrolabe. Invented by Bhāskara II,[12] it is a rectangular board on which are drawn a number of horizontal parallels. A peg is attached at the centre of the board at right angles to the surface of the board and a circle is drawn with the peg as the centre. The shadow of the peg falling on the circle and on the parallel lines enables the astronomer to determine graphically time and other elements.[13] However, not a single specimen of the *phalaka-yantra* has survived.[14] Therefore Gaṅgāsahāya's attempt at using the back of the astrolabe as a *phalaka-yantra* is historically valuable. For this purpose, starting a little above the centre, he draws a number of equi-distant horizontal parallels up to the centre and beyond

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11 It was described by Brahmagupta in his *Brāhmasphuṭasiddhānta* 22.18, by Lalla in *Śiṣyadhīvṛddhidatantra* 21.18-21 and by Bhāskara II in *Siddhāntaśiromaṇi, Golādhyāya, Yantrādhyāya*, 10-15ab. Commenting on Bhāskara II's treatment of the *Cakrayantra*, Nṛsiṃha Daivajña remarks: *idam eva cakrayantram akṣapatra-bhapatrayutaṃ yantrarāja ity āhuḥ*, 'The same graduated disc (*cakra-yantra*), when equipped with latitude plates (*akṣa-patra*) and rete (*bha-patra*), is called the astrolabe (*yantrarāja*),' cf. *Siddhānta-śiromaṇi of Bhāskarācārya with his autocommentary Vāsanābhāṣya & Vārttika of Nṛsiṃha Daivajña*. ed. by Murali Dhara Chaturvedi, Varanasi 1981, p. 444. Of course, Nṛsiṃha is well aware that the transition from a graduated disc to the astrolabe is not that simple. Immediately after this remark, he proceeds to describe the construction and use of the astrolabe in great detail, citing extensively from Rāmacandra Vājapeyin's *Yantraprakāśa* and Mahendra Sūri's *Yantrarāja* (*ibid*, pp.445-456).

12 *Siddhāntaśiromaṇi, Golādhyāya, Yantrādhyāya* 16-22.

13 Cf. Yukio Ôhashi, 'Astronomical Instruments of Bhāskara II and After' in: B. V. Subbarayappa & S. R. N. Murthy (ed), *Scientific Heritage of India*, Bangalore 1988, pp. 19-23, esp. 20: '*Phalaka-yantra* is Bhāskara II's invention, and is an instrument for both observation and graphical calculation. It is a rectangular board whose height is 90 *aṅgulas* and the breadth 180 *aṅgulas*. Horizontal lines are drawn at every *aṅgula*, and a hole is made at the middle of the 30th line from upside in order to place a pin. A circle with a radius of 30 *aṅgulas* is drawn from the hole as centre. Its circumference is graduated with *ghaṭīs* and degrees. An index arm is suspended by the pin. Firstly the sun's altitude is observed by this instrument, then correction of ascensional difference is done graphically in order to determine time.' See also idem, 'Astronomical Instruments in India' in: Helaine Selin (ed), *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures* (2nd edition), Springer, 2008, pp. 269-273, esp. p. 270; Fig. 1 on p. 272 shows a hypothetical reconstruction of the instrument.

14 In 1885, Rāmacandra (s.v.) Joṣī of Kuchaman incorporated a *phalaka-yantra* in a diptych dial.

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up to the lower periphery. Two concentric circles with different radii are drawn from the centre. How this arrangement can be used simultaneously as *turīya-yantra*, *cakra-yantra* and *phalaka-yantra* will be discussed elsewhere. Here it remains to be added that unfortunately we do not know the present location of this unique Sanskrit astrolabe designed by Gaṅgāsahāya in 1895. Our information is based on two photographs in the archives of the Museum of the History of Science at Oxford.

Gaṅgāsahāya-śiśuka caused a very large astrolabe to be made by the artisan (*śilpin*) **Śivalāla** at Bundi (25;27°N; 75;41°E), Rajasthan, in vs 1927 *Pauṣa śuddha* 3 (= Sunday, 25 December 1870) on the birthday of the ruler **Rāmasiṃha**. It has a single plate calibrated for the latitude of Bundi at 25;30°, preserved at the Science Museum, London. It is a huge instrument with a diameter of 662 mm. It cannot be held aloft in one hand for the purpose of observation; it is obviously designed for demonstration and teaching. The names of many circles are written and explained. The inscription on the crown reads thus (Figure 1):

śrīparameśvarāya namo namaḥ
bhanavendumite 1927 vikrama-
varṣe pauṣe site tṛtīyāyāṃ [।]
śrī-rāmasiṃhavarddhāpana-
divase yantrarājapūrttir abhūt 1 [॥][15] [metre: *Gītī*]
skandhe kutūhalavato gaṇitābhidhāne
śrīrāmasiṃhadharaṇīśanideśabhājaḥ ।
gaṅgāsahāya-śiśukasya matena saumyaṃ
śrīyaṃtrarājam atanoc chivalālaśilpī 1 [॥] [metre: *Vasantatilakā*]
gaṅgāsahāya-śiśuka-khedaccheda-sahāyatāṃ (°*kheṭa-cchedya*° ?) [।]
gaṇite 'bhajad ānandīlālaś chaganalāla-yuk 1 [॥] [metre: *Anuṣṭubh*, irregular]
saumyanāmā yantrarājaḥ

'Salutation, salutation to the glorious Parameśvara. In the *Vikrama* year measured by the lunar mansions (*bha* = 27), nine (*nava* = 9) and the moon (*indu* = 1) (i.e. 1927), on the third day of the bright fortnight in the month of *Pauṣa*, on the birthday of the glorious Rāmasiṃha, this instrument was completed.

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15 Here and below, instead of the double *daṇḍa*, the engraver employs a symbol which resembles the Devanāgarī numeral 1.

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'The artisan Śivalāla constructed this glorious northern (*saumya*) astrolabe (*yantrarāja*) according to the design (*mata*, lit. view) of Gaṅgāsahāya-*śiśuka* who was interested in the branch called mathematical astronomy (*gaṇita*) and who received orders [to construct this astrolabe] from the glorious king Rāmasiṃha.

'Ānandīlāla, accompanied by Chaganalāla, rendered assistance in the mathematical computations (*gaṇita*) to Gaṅgāsahāya-*śiśuka* in [connection with] the drawings of astronomical projections (*kheṭa-cchedya* ?).'

'An astrolabe (*yantrarāja*) by name the Northern [variety] (*saumyanāmā*)

There are two sets of legends on the rete. While the former refer to the star positions marked according to Sanskrit astronomical tradition (*siddhānta*), the latter to those marked according to Islamic astronomical tradition (*yavanamata*). On the back is engraved the entire fifth chapter of Mahendra Sūri's manual on the astrolabe entitled *Yantrarāja*.[16] This chapter, called *Yantravicāraṇādhyāya* teaches how to use the astrolabe for observation and for computation and for solving diverse kinds of problems.

Perhaps this person is the son of Gaṅgāsahāya (s.v.), but *Gaṇgāsahāya-Śiśuka* (lit. Gaṅgāsahāya's infant) is a strange expression.

Gajasiṃha, ruler of Jodhpur from 1619 to 1639 and patron of **Cakrapāṇi** (s.v.) who made an astrolabe in 1625.

Gokulanātha Śarmā made, or more probably designed, a horizontal sundial with a triangular gnomon (*palabhā-yantra*) in pink sandstone in vs 1939/AD 1882. Jaipur Observatory. Inscription:

idaṃ palabhāyatraṃ । gokulanāthaśarmmaṇā । racitaṃ saṃvat 1939 ।
atra nataghaṭikā jñeyāḥ ।

'This *palabhā-yantra* was made by Gokulanātha Śarmā. Saṃvat 1939 (=AD 1882). Here [the divisions on the dial] are to be known as *ghaṭikās* up to/from the noon (*nata-ghaṭikā*).'

16 Kṛṣṇaśamkara Keṣavarāma Raikva (ed), *Yantrarāja of Mahendra Sūri, together with the commentary of Malayendu Sūri and Yantraśiromaṇi of Viśrāma*, Bombay 1936.

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Cakrapāṇi, son of **Viśvanātha**, made at Jodhpur in 1625 during the reign of **Gajasiṃha,** an astrolabe with a diameter of 108 mm of which only the mater survives. In 2002, it was auctioned by Skinner, Bolton, USA.[17] PLU. Inscription engraved on the crown and continued on the rim for about three quarters:

śrīsaṃ. 1682 varṣe mārgaśira śu 1 ravau mahārājādhirājamahārāja-śrī-gajasiṃhajī-vijayarājye pokaraṇījñātīyapra. śrī-viśvanāthātmaja-śrī-cakrapāṇinā kṛtam idaṃ [sic! read *ayaṃ*] *yantrarājaḥ* ॥śrī॥

'In the glorious *Saṃvat* year 1682, on Sunday, the first day of the bright half of *Mārgaśirṣa* (= 30 November 1625) in the victorious reign of *Mahārājādhirāja Mahārāja* Gajasiṃhajī, this astrolabe was made by glorious Cakrapāṇi, son of glorious Viśvanātha of the Pokaraṇī-*jñāti*.'

Caṇḍīdatta. For Caṇḍīdatta's son, a *yantra-cintāmaṇi* was made by the astrologer **Hṛṣīkeśa** (s.v.).

Caṇḍīdāsa (probably designed and) commissioned an astrolabe for his son **Dāmodara** in 1605 at Ahmedabad, during the reign of the Mughal emperor Jahāṅgīra. It is a massive astrolabe with a diameter of 276 mm and six plates. It was formerly with the Time Museum, Rockford; now in a private collection at Brussels.[18] This is the earliest extant Sanskrit astrolabe and is very important for the history of Sanskrit astrolabes. Inscription on the inner side of the mater:

śrīgaṇādhipati[r] jayatu ॥

svasti śrī saṃvat 1663 varṣe śāke 1528 pravarttamāne māghavadi 1 pratipadātithau ravidine amadāvādanagare mahāsuratrāṇa pātasāha śrī salīma-sāha-rājye yaṃtrarāja jo° caṇḍidāsaiṃ karāvyu । purtra damodara paṭhanārthaṃ ॥ śubhaṃ bhavatu ॥

17 Skinner, *Science & Technology, featuring Mechanical Music* (Auction Catalogue), sale 2133, 13 April 2002, Bolton, No. 244, pp. 38-39.

18 This astrolabe has been discussed in several publications: A. J. Turner, *Astrolabes, Astrolabe-related Instruments*, Rockford 1985 (The Time Museum, Catalogue of Collection, Vol. I, Part 1), No. 15, pp. 120-123; Christie's, *Time Measuring Instruments from the Time Museum*, Auction Catalogue, Thursday 14 April 1988, Lot 157, pp. 98-99; Sreeramula Rajeswara Sarma, '*Yantrarāja* for Dāmodara: The Earliest Extant Sanskrit Astrolabe,' to appear in the proceedings of the conference on astronomy and mathematics in ancient India held on 24 April 2009 at the Altaṃr Centre d'Histoire de Sciences et des Techniques, Brussels.

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'May the lord of the *gaṇas* (=Gaṇeśa) be victorious. May it be well. In *Saṃvat* 1663, *Śaka* 1528 current, on *pratipadā*, the first lunar day of the dark fortnight (*vadi*) of *Māgha*, on Sunday, at the city of Ahmadabad, during the reign of the Great *Sultān*, the *Badshāh*, the illustrious Salīm Shāh (i.e., Mughal Emperor Jahangir), [this] astrolabe (*yantrarāja*, lit. king of instruments) was caused to be made (*karāvyu*) by the astrologer Caṇḍīdāsa for the purpose of the reading of [his] son Damodara. Let it be auspicious.'

The date translates to 25 December 1606. The sentence begins in Sanskrit, but ends in medieval Gujarati (*caṇḍidāsaiṃ karāvyu* for Sanskrit *caṇḍīdāsena kāritam*). However, such linguistic mixture is not unusual in the popular Sanskrit in medieval Gujarat.

Chaganalāla assisted **Gaṅgāsahāya Śiśuka** (s.v.) in designing a very large astrolabe in 1870.

Jagatārasiṃha, father of **Kalyāṇa** (s.v.) who made an astrolabe for **Puruṣottama** in 1642.

Jayakṛṣṇadāsa, Jośī,designed two astrolabes which were made by Ustāda **Lakṣmīnārāyaṇa** (s.v.) in 1887 and 1902.

Jemaṃgala carved a wooden column dial in VS 1941/AD 1884. Horniman Museum, London, length 1166mm. Inscription in a mixture of Sanskrit and vernacular:

śrīsaṃvat 1941 sāla miti pauṣa śudi 6 roja śubhaṃ Jemaṃgala dvija hastajesti (?) liṣitaṃ

'In the glorious *Saṃvat* year 1941, on the sixth day of the bright half of *Pauṣa* (= Tuesday, 23 December 1884). [Let it be] auspicious. [By] Brahmin Jemaṃgala (*hastajesti* ?) [it] was carved.

Dāmodara, for whom an astrolabe was commissioned by his father **Caṇḍīdāsa** (s.v.) at Ahmedabad in 1605.

Dharm Chand, Joshī, (*fl.* 1854-73) designed several instruments with legends in Sanskrit, Persian/Urdu and English.[19] Two of his instruments carry legends in Sanskrit.

19 On his oeuvre, see Sreeramula Rajeswara Sarma, *Astronomical Instruments in the Rampur Raza Library*, Rampur 2003, pp. 78-84.

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(i) Quadrant-cum-Astrolabe, 212 x 615 mm, legends in Sanskrit, inscription in Persian, vs 1911/AD 1854-5, Linden Museum, Stuttgart.[20] On the obverse side, at the top of the plate, there is the signature of the maker in Persian, which reads *taṣnīf joshī dharam chand sambat 1911*, 'The invention [of] Joshī Dharam Chand, Saṃvat 1911.' The year corresponds to AD 1854. The rest of the legends on this instrument are in Sanskrit and in Devanāgarī characters.

(ii) An identical piece came for auction at Skinner in 2002.[21]

Nandarāma caused, in AD 1767, Sanskrit legends to be engraved on an Indo-Persian celestial globe (diameter 254 mm) made by Muḥammad Ṣālih Thatta in AH 1074/AD 1663.[22] Nasser D. Khalili Collection of Islamic Art, London. The Sanskrit inscription engraved near the southern equatorial pole reads (Figure 2):

śuciśuklasya paṃcamyāṃ siddhanāgeṃduvatsare ।
naṃdarāmeṇa golo'yaṃ kṛtaḥ sopaskaro mude ॥ [metre: *Anuṣṭubh*]

'On the fifth day of the bright half of *Āṣāḍha* (*śuci*) in the [*Vikrama*] year [denoted by] the *Siddhas* (=24), elephants (*nāga* = 8) and the moon (*indu* = 1) (i.e.1824), this [celestial] globe was endowed with additional [labels in Sanskrit] by Nandarāma for [his own] pleasure.' The date translates to Wednesday 1 July 1767. Nandarāma (*fl.* 1763-1778), resident of Kāmyakavana in the Braj region, i.e. region around Mathura on the border between Rajasthan and Uttar Pradesh, composed several works on *Jyotiḥśāstra*, including one on instruments with the title *Yantrasāra* (*Śaka* 1693/ AD 1771).[23]

Narinder Singh, *Mahārājā* of Patiala (r.1845-1862), commissioned in 1850 the unique Gurumukhī/Punjābī astrolabe, which was designed by the astronomer **Rishīkesh** (s.v.) and fabricated by the artisan **Rahīm Bakhsh**.

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20 Sreeramula Rajeswara Sarma, 'Indian Astronomical Instruments in German Collections,' *op. cit.*, pp. 29-32.

21 Skinner, *Science & Technology, featuring Mechanical Music* (Auction Catalogue), sale 2133, 13 April 2002, Bolton, No.233, p. 36.

22 The globe is described by Emilie Savage-Smith in: Francis Maddison & Emilie Savage-Smith, *Science, Tools & Magic*, Part I: *Body and Spirit, Mapping the Universe*, Oxford 1997, No. 134, pp. 237-238. The addition of Sanskrit legends is discussed by Sreeramula Rajeswara Sarma, *The Archaic and the Exotic*, op. cit., p. 307; idem, 'Yavana-yantra to Yantrarāja: Reworking of Arabic Astrolabes in India,' presented at XXIII International Congress of History of Science and Technology, Budapest, Tuesday 28 July- Sunday 2, August 2009.

23 Cf. David Pingree, *Census of the Exact Sciences in Sanskrit*, Series A, Volume 3, Philadelphia 1976, pp. 128-130; vol. 5, Philadelphia 1994, p. 157.

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Puruṣottama, for whom **Kalyāṇa** (s.v.) made an astrolabe in 1642.

Premajī, Paṃḍyā, s.o. Paṃḍyā **Vīrajī**, for whom Sonī **Morārajī** (s.v.) made two *dhruvabhrama-yantras* in 1815.

Bālādatta (see Hṛṣikeśa).

Bhāramala, ruler of Kutch, during whose reign Sonī **Morārjī** (s.v.) produced two nearly identical *dhruvabhrama-yantras* for Paṇḍyā **Premajī** in 1815.

Bhālūmal (*fl.* 1839-1850). He signs his name variously as Vuhlomalla, Vuhlovarma, Volhomalla, Lālah Balhūmal Lāhūrī. The actual name is probably Bhālūmal. Some twenty instruments of diverse types, inscribed in Arabic/Persian or in Sanskrit, were made by him. He is not an artisan, but a scholar well-versed in both the Islamic and the Sanskrit traditions of instrumentation.[24] The following five instruments carry Sanskrit legends and signatures in *Anuṣṭubh* metre.

(i) Celestial Globe, Sunday 27 January 1839, diameter 140 mm, PC, London. Inscription engraved on the lower half of the Pisces segment, under the tail feathers of the constellation figure *Samudrapakṣī* (i.e. Cetus), in three *Anuṣṭubh* verses:

iṣvaṃkāṣṭendumāne 'bde vikramārkasya bhūbhujaḥ ।
māghe māse site vaiśve ravau vāre śubhe tithau ॥1॥
śrīgaurīśvara-pādābja-sevānirmalacetasā ।
khagolādhya-bhagolo 'yaṃ vulhomallena nirmitaḥ ॥2॥
golatrayopapattyarthaṃ viduṣāṃ bodhagocaraḥ ।
śrī-madhusūdana-pādābje vinayena samarppitaḥ ॥3॥

'In the year measured by the arrows (*iśu* = 5), digits (*aṅka* = 9), eight (*aṣṭau* = 8) and the moon (*indu* = 1) (i.e. 1895) of king Vikramārka, on the auspicious thirteenth (*vaiśva*) lunar day in the bright [half] of the month *Māgha*, on Sunday, (= Sunday, 27 January 1839),

'this celestial globe (*bhagola*) endowed with the sphere of the sky (*khagola*) was constructed by Bhālūmal (*vulhomalla*) whose mind is clear owing to [his] devotion to the lotus feet of the glorious Pārvatī and Śiva,

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24 Cf. Sreeramula Rajeswara Sarma, 'Indian Astronomical and Time-Measuring Instruments: A Catalogue in Preparation,' *Indian Journal of History of Science*, 29.4 (1994) 507-528, esp. 523 ; reprinted in: idem, *The Archaic and the Exotic, op. cit.*, pp. 19-46, esp. 44; idem, *Astronomical Instruments in the Rampur Raza Library*, Rampur 2003, p. 10.

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'for the demonstration of the three types of spheres (*gola-traya-upapatti-arthaṃ*).[25] [This globe, which is] comprehensible to the learned, is dedicated with humility to the lotus feet of the glorious Madhusūdana.'

(ii) *Dhruvabhrama-yantra*, vs 1896/AD 1839, 225 x 179 mm, Butler Library, Columbia University, New York. Inscription engraved above the horizontal slit:

śrībhavānīśvaraṃ dhyātvā dyuniśāṃgāvabodhārthaṃ ।
turyyaṃ dhruvābhidhaṃ yaṃtraṃ volhomallena nirmitaṃ ॥
saṃvat 1896

'Having meditated upon the glorious Pārvatī and Śiva, this *Dhruvabhrama-yantra* (lit. the quadrant instrument designated as *Dhruva*), for the knowledge of the parts of the day and of the night, was constructed by Bhālūmal (*volhomalla*).'

(iii) Horary quadrant engraved in four parts on a circular plate which is shaped like an astrolabe and equipped with an alidade, vs 1896/AD 1839, diameter 88 mm, for latitude 31;58° N (i.e. of Lahore), Victoria &Albert Museum, London. Inscription engraved in the middle of the instrument:

śrīgaurīśakaruṇāpātra-vulhomallena nirmitaṃ ।
tarkāṃkavasucandrābde jyotiḥsattābhidaṃ sphuṭaṃ ॥

'This accurate [instrument] designated as *jyotiḥsattā* (?), was made by Bhālūmal (*vulhomalla*), the receptacle of Śiva's grace, in the [*Vikrama*] year [denoted by] the philosophical systems (tarka[26] = 6), digits (*aṅka* = 9), the *vasus* (= 8) and the moon (*candra* = 1) (i.e. vs 1896 = AD 1839).'

(iv) Horary quadrant engraved in four parts on a circular plate which is equipped with an alidade, vs 1896/AD 1839, diameter 92 mm, for latitude 31;58° N (i.e. of Lahore), National Museum, New Delhi. Inscription engraved in the middle of the instrument:

oṃ gaurīśakaruṇāpātra-vulhomallena nirmitaṃ ।
tarkāṃkavasucandrābde jyotiḥsanrābhidhaṃ sphutaṃ ॥

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25 Three types of spheres are probably the sphere of the sky (*khagola*), the sphere of the asterisms (*bhagola*) and the sphere of the planets (*grahagola*), envisaged in an armillary sphere. Cf. Lalla, *Śiṣyadhīvṛddhida-tantra*, with the commentary of Mallikārjuna Sūri, edited and translated by Bina Chatterji, New Delhi 1981, ch. xv: *Golabandhādhikāra*.

26 Literally 'logic', one of the six traditional philosophical systems.

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'Oṃ. This accurate [instrument] designated as *jyotiḥsanrā* (sic!), was made by Bhālūmal (*vulhomalla*), the receptacle of Śiva's grace, in the [*Vikrama*] year [denoted by] the philosophical systems (*tarka* = 6), digits (*aṅka* = 9), the *vasus* (= 8) and the moon (*candra* = 1) (i.e. VS 1896 = AD 1839).'

Nos. (ii) and (iii) are identical instruments though of slightly different sizes. The inscription begins in (iii) with *śrī*, but in (iv) with *oṃ*. More problematic is the name of the instrument *jyotiḥsattā* in (iii) and *jyotiḥsarnā* or *jotiḥsatrā* (iv). The second is clearly an error, but even the first (lit. existence of the luminaries) makes no sense as the name of an instrument.

(v) Horary quadrant, nd, radius 119 mm, Museum of the History of Science, Oxford. Inscription engraved near the apex of the quadrant (Figure 3):

śrīgirijāpatipadaṃ natvā turyyaṃ vināyāsam ।
vulhovarmmakṛtam śrīviduṣāṃ samayāvabodhāya ॥

'Having bowed to the feet of [Śiva] the consort of Pārvatī, this quadrant (*turya*) was made by Bhālūmal (*vulhovarmma*) for the glorious learned men to know the time without effort.'

Makhan Lāl, Lālah, teacher of **Mangāran** (s.v.) who boasts of his being the *śāgird-i raśīd*, i.e. a devout and worthy pupil to whom the teacher had imparted all the secrets of the trade.[27] However, no instruments made by this teacher are extant.

Mangāran of Patna (*fl.* 1859-68). Made three (or more[28]) nearly identical specimens of a sundial, imitating some European model, possibly of French origin. It is an equinoctial sundial which can be adjusted to the local latitude. A magnetic compass attached to the instrument allows the instrument to be placed on a north-south axis. The scales are marked with the so-called Arabic or English numerals, to measure time in hours of 60 minutes and *ghaṭīs* of 24 minutes. On one side of the dial, Sanskrit names of the twelve zodiac signs are written in Devanāgarī script. The maker's inscription is in Persian language and script, stating that the instrument was manufactured at Patna by Mangāran who was a worthy pupil (*shāgird-i rashīd*) of Lālah **Makhan Lāl** (s.v).

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27 Muhammad Mustāfā Khān 'Maddāh', *Urdū-Hindī Śabdakośa*, 6th edition, Lucknow 1989, s.v.

28 A dealer in Lucknow told me in 2001 that he had acquired a dozen such pieces and disposed off all but one.

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(i) Khuda Bakhsh Oriental Public Library, Patna, AH 1275 / AD 1859.[29]

(ii) Victoria & Albert Museum, London, AH 1284/AD 1868.

(iii) Sotheby's, London (Auction 24 October 2007), AH 1295/AD 1878.[30]

Maṇirāma commissioned in 1644 an astrolabe with a diameter of 128 mm, which is now at the Royal Scottish Museum, Edinburgh.[31] Inscription on the front side of the crown:

saṃvat 1700 caitrakṛṣṇaikādaśyāṃ maṇirāmeṇa kāritam.
līlānātha-jyotirvido 'yaṃ

'In *Saṃvat* 1700 on the eleventh day of the dark half of *Caitra* (=2 April 1644), [it] was caused to be made by Maṇirāma.' A later owner **Līlānātha** (s.v.) got his name engraved in a new line: 'This [instrument is] of Līlānātha *Jyotirvid*.'

Mannālāla, officer (*dārogah*) in charge of justice (*dārogya-dharmadhvajaḥ*) at the court of *Sawai* Ram Singh (1835-1880) of Jaipur, caused a beautiful astrolabe to be made by **Śyudatta** (= Śivadatta) for the latitude of 27°N, which is that of Jaipur. Science Museum, London, diameter 344.5 mm. The inscription, silver inlaid on brass inside the shadow squares, reads thus in *Śārdūlavikrīḍita* metre:

śrīkūrmānvayi-rāmasiṃha-nṛpater dārogya-dharmadhvajo
mannālālabudhaḥ prasiddhanagare nāmnā jaye 'kārayat ।
śrīsomeśvara īśa-netra-nidhi-tānāgendranābde site
śrāvaṇye 'kṣitithau śyudattaracitaṃ ca tad bhrājatām ॥

'The learned Mannālāla, the Dārogah and the banner of justice of King Rāmasiṃha of the Kūrma (i.e. Kachchwaha) dynasty, caused this [astrolabe] to be made in the famous town by name Jaya (i.e. Jaipur). May this [instrument], which was made by Śyudatta (= Śivadatta), on the second (*akṣi* = 2) lunar day of the bright half of *Śrāvaṇa* month, in the year ...., flourish!'

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29 Sreeramula Rajeswara Sarma, 'Some Indo-Persian Astronomical Instruments of the early Nineteenth Century,' *Khuda Bakhsh Library Journal*, No. 123 (April 2001) 1-16.

30 Sotheby's, *Arts of the Islamic World, including Fine Carpets and Textiles*, Auction Catalogue, London, 24 October 2007, no. 200, p. 187.

31 Sreeramula Rajeswara Sarma, '*Yantrarāja* at Edinburgh: On the Sanskrit Astrolabe made for Maṇirāma in AD 1644' to appear in S. R. Sarma & Gyula Wojtilla (ed), *Scientific Literature in Sanskrit* (Proceedings of the 13th World Sanskrit Conference, Section 8), Motilal Banarsidass, Delhi 2010 (?).

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The year is difficult to decipher. For a four-digit number, there are too many word numerals in the third line. The expression *Someśvara*, in nominative, vocative or locative case, is clearly not a part of the compound. Leaving this expression aside, *īśa* = 11, *netra* 2, *nidhi* = 9, or *īśa-netra* 3, *nidhi* = 9. The last expression is complicated: either it is *tāna-aga-indra-na-abde* where *tāna* = 49, *aga* = 7 and *indra* = 14, but *na* makes no sense, or it is *tā-nāgendra-na-abde* where *nāgendra* is 8, but *tā* and *na* make no sense. The auction catalogue of Ader Picard Tajar[32] states that the astrolabe is dated AD 1842, which should correspond to vs 1899 and *Śaka* 1764. It is impossible to derive either number from the Sanskrit text! But the catalogue did not even decipher the name Mannālāla correctly.

Mādhavasiṃha (popularly known as Sawai Madho Singh), son of Sawai Jai Singh, ruled Jaipur state from 1750 to 1767. Two instruments bear his name. These two items are in burnished brass and the lines, numbers and inscriptions are filled with black and red enamel. A third one, in wood, does not carry his name but is attributable to him on stylistic and other grounds. All the three instruments are preserved in the stores of the Jaipur Observatory. A cloth instrument designed by him is in the Sawai Mansingh II Museum, City Palace, Jaipur.[33] Thus, he seems to have continued his father's interest in astronomical instruments, but on a miniature scale. The inscriptions on the four instruments are as follows:

(i) A set of three square column dials (50 x 50 x 455; 50 x 50 x 455; 42 x 42 x 420 mm) called *soṭā-yantras*. All the three bear an identical inscription in *Anuṣṭubh* metre:

prakāśaṃ mādhavavyāghrabuddher niṣpakṣapātataḥ ।
paśyānāyāsataḥ sūkṣmaṃ svaprakāśaḥ prakāśitaḥ ॥

'Look dispassionately at the brilliance of the intellect of Mādhava the Tiger/ Mādhava with the Tiger's intellect. Without much effort, he made his brilliance manifest minutely.'

(ii) Horary quadrant with separate scales for each 3° of solar longitude arranged in eight parts on the two sides of a circular plate (diameter 345 mm) which is shaped like an astrolabe and equipped with an alidade. While the astrolabe is called *yantrarāja* ('king

32 Ader Picard Tajan, Paris, *Instruments scientifiques anciens*, auction catalogue, 23 March 1983, No. 47, p. 26.

33 David Pingree, *A Descriptive Catalogue of the Sanskrit Astronomical Manuscripts Preserved at the Maharaja Man Singh II Museum in Jaipur, India*, Philadelphia 2003, No. 221, pp. 107-109.

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of instruments') in Sanskrit, this one bears a grander designation *Yantrādhipati* ('overlord of instruments') which is engraved on the crown. Inscription at the centre of the plate in four *Anuṣṭubh* verses:

śrīman-mādhavasiṃhasya paśyemāṃ yantranirmitiṃ ।
paśyan prajñāti mūrkho 'pi tatkālaṃ kālavid bhavet ॥
jīyāc ciram ayaṃ yasya vāgvilāsaṃ pramādataḥ ।
śrutvā mandaḥ kīdṛśo 'pi sadyo 'sau kṛtimān bhavet ॥
yaḥ (yat?) kṛpākṣanimeṣeṇa durbhāgyo yasya lakṣitaḥ ।
tatkṛpādṛṣṭikaṇikāṃ vāñchanti bhāgyaśālinaḥ ॥
sa jayaty asya kopāgnir yallavaḥ svavirodhinaṃ ।
dṛptaṃ dahati saṃvṛddhasamudrajalam aurvavat ॥

'Behold the design (*nirmiti*) of this instrument of the glorious Mādhavasiṃha! Looking at this, even a fool will understand [time] and become at once a knower of time.

'May he live long! After listening to the flourishes of his speech [even] by chance (*pramādataḥ*, lit. by mistake). one would become— howsoever dullard one might be— at once an accomplished person.

'By the flutter of whose compassionate eyes, the misfortune of whosoever is seen [will be dispelled]; fortunate ones desire a fraction of his compassionate glance. (Difficult syntax; it probably means: a glance of his compassionate eyes dispels the misfortune of anybody on whomsoever it falls; therefore fortunate people desire even a fraction of that glance to fall on themselves).

'Victorious is that fire of his anger, a spark from which burns down his arrogant enemy, just as the marine fire burns down the abundant waters of the ocean.'

(iii) Wooden folding sundial, also called *soṭā-yantra*, which is attributable to him, carries this inscription.

yad viparīte 'py anukūlaṃ kṛte 'pi
yadvat karma nareśasya bhavati ।
tathā viparīte kṛte 'pi yantre
phalam apy anukūlam ॥ [metre irregular]

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'Just as the king's action, though adverse, turns out to be favourable, even so, when this instrument is held upside down, the result (reading) will be correct.'

(iv) Star chart painted on starched cloth, 765 x 735 mm. A red silk thread with a red and green silk tassel is attached to the centre of the chart and functions as an index to show for any given moment the risings, culminations and settings of several *nakṣatras* and other astrolabe stars. Inscription painted in the middle of the chart:

jayati yaṃtram idam jhaṭiti sphuṭaṃ
diśati darśanato 'sya niśāgataṃ ।
tanunṛpāspadapatnisukhānvitaṃ
nṛpati-mādhavasiṃhavinirmitaṃ 1 ॥ [metre: *Drutavilambita*]

'May this chart (*yantra*, lit. instrument) designed by King Mādhavasiṃha be victorious. Just by looking at it, it shows instantly and clearly the nocturnal ... (?).' The third line which literally means 'endowed with the happiness of the wife, the abode of the slender king' makes absolutely no sense in this context.

Madho Singh is said to be an accomplished poet who compiled an anthology of Sanskrit poems and rendered them into Brajabhāṣā.[34] But the present attempts at versification do not betray his poetic talents.

Murārajī Kuarajī, Ṭhākura, made an astrolabe at Varanasi in vs 1695/AD 1638, which was owned by Josī **Haranātha**. Bhandarkar Oriental Research Institute, Pune, diameter 158 mm. The inscription in Sanskrit mixed with medieval Gujarātī, engraved on the rim of the astrolabe, reads as follows:

śrīsaṃvat 1695 varṣe mārgasiravadi 13 śukre vārāṇāsīmāṃ ṭhākura murārajī kuarajī vaiśaṇau kīḍho jaṃtrarāja pātaśāha śrīśāhajāhā vijayarājye sana ।।1।।śrī।।

'In the glorious Saṃvat year 1695, on Friday, the thirteenth day of the dark half of *Mārgasira*, in the [regnal] year (*sana* from the Arabic *san*) eleven in the victorious kingdom of the emperor (*pātaśāha*), the glorius Shāh Jahān (= Friday, 3 December 1638), *Ṭhākura* Murārajī Kuarajī *Vaiṣṇava* made (*kīḍho*) this astrolabe (*jantrarāja*) in Varanasi.'

34 Gopal Narayan Bahura, *Literary Heritage of the Rulers of Amber and Jaipur, with an Index to the Register of Manuscripts in the Pothikhana of Jaipur (1. Khasmohor Collection)*, Maharaja Sawai Man Singh II Museum, City Palace, Jaipur 1976, pp. 75-77.

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An inscription on the front side of the crown proclaims the ownership thus:

josī haranātha vāṃchaḍā buhurānapurīṇo yaṃtrarāja.

'The astrolabe (*yaṃtrarāja*) is of (belongs to) Josī Haranātha Vāṃchaḍā of Burhanpur.'

It is indeed remarkable that an artisan by name *Ṭhākura* Murārajī Kuarajī *Vaiṣṇava* makes an astrolabe in Varanasi for an astrologer Haranātha Vāṃchaḍā, who belongs to Burhanpur in Central India, and engraves on it two inscriptions regarding the owner and the maker, mainly in Sanskrit language, but with the operative verb (*kīḍho*) and a genitive particle (*no*) in Gujarati!

Motilāla made a unique but incomplete *dhruvabhrama-yantra* in wood and ivory (240 x 276 x 9 mm), the lines and legends on which were produced by inlaid silver wire, in *Śaka* 1707/AD 1785 for King **Kīrticandra**. PC, Brussels. The inscription along the arc of the quadrant on the reverse side, in *Indravajrā* metre, reads thus:

munyabhravāraikamite śakābde
śrī-kīrticaṃdrasya nṛpādhipasya ।
ājñānusārād akarot suyaṃtraṃ
śrī-motilālābhidha-śilpisiṃhaḥ ।।

'In the *Śaka* year measured by the sages (*muni* = 7), sky (*abhra* = 0), weekdays (*vāra* = 7) and one (i.e. *Śaka* 1707 = AD 1785), following the orders of the lord of the kings, the glorious Kīrticandra, the lion among the artisans (*śilpisiṃha*), the glorious Motilāla, made this excellent instrument.'

This is the earliest extant specimen of the *dhruvabhrama-yantra* which, due to an unfortunate error in the placement of zodiac signs on the dial, was left incomplete. Kīrticandra was apparently the ruler of some kingdom in Rajasthan around 1785 but it has not been possible to identify him.

Morārajī, Sonī, of Bhuj, Saurashtra, Gujarat, crafted two nearly identical *dhruvabhrama-yantras* for Paṇḍyā Premajī, son of Paṇḍyā Vīrajī, in 1815 during the reign of Bhāramala.

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These two instruments were auctioned in Paris in 1980.[35] One (161 x 121 mm) was acquired by the Paris Observatory and the other (165 x 120 mm) by the Museum of the History of Science, Oxford.[36] The inscription on the obverse:

adye śrībhujanagaramadhye mahārājya-rāu-śrī-bhāramalajī-vijayarājye śrī paṇḍyā vīrajī tasyātmaja paṇḍyā premajīkasya idaṃ dhruvajaṃtraṃ kra(sic! read *kṛ*)*taṃ sonī morārajī.*

'Today, in the city of Bhuj, during the victorious reign of Mahārāja Rāu Śrī Bhāramalajī, this *dhruvabhrama-yantra* of Paṇḍyā Premajī, son of Śrī Paṇḍyā Vīrajī, was made [by] Sonī Morarajī.'

Reverse:

śrīmana rājā vikramārkarājye saṃvat 1872 varṣe
śālīvāhanaśāke 1738 pravartamāne jyeṣṭha va-
di 11 śukre tad[d]ine sāyano ravi 3/0/0/0/ akṣa
bhā 5/0 akṣakarṇa 13 daṃkṣākrāti (sic!) *22/30 sadaiva*
kacha saurāṣṭra yaṃtram idam ||

'In the *Saṃvat* year 1872 of the reign of the glorious king Vikramārka, the current year 1738 of *Śālivāhana* era, on Friday, the eleventh day of the dark half of *Jyaiṣṭha* (= 2 June 1815). On this day the Sun's tropical longitude (*sāyano raviḥ*) is 3/0/0/0; equinoctial shadow (*akṣabhā*) 5/10; equinoctial hypotenuse (*akṣakarṇa*) 13; latitude (*daṃkṣākrāti* !) 22;30. This instrument should be employed always in Kacch, Saurashtra.' The correct latitude is 23;15° N; longitude 69;49° E. Instead of *akṣāṃśa*, the inscription employs *daṃkṣākrāti* for latitude, which makes no sense and is clearly an error.

Yādo Josi of Ukala-*grāma* owned or made a *dhruvabhrama-yantra*, now at the Raja Dinkar Kelkar Museum, Pune, 104 x 112 mm. Inscription engraved on the reverse side containing the quadrant: *ukalagrāmasthita yādo josi*, 'Yado Josi resident of Ukala village.'

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35 Leonard Linton, *Collection Leonard Linton et de divers amateurs*, Catalogue of Auction at Paris on 9-10 October 1980, Paris 1980, Nos. 229 and 230, pp. 183-184.

36 Cf. R. G. W. Anderson, *Science in India: A Festival of India Exhibition at the Science Museum, London, 24 March – 1 August 1982. Catalogue*, Science Museum, London 1982, No. 132, p. 36; Jean-Pierre Verdet, 'A propos de deux petits quadrants indiens' in: W. D. Hackmann & A. J. Turner (ed), *Learning, Language and Invention: Essays presented to Francis Maddison*, Aldershot-Paris 1994, pp. 309-321.

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Raṇakuṃjalāla made or owned a Sanskrit astrolabe (diameter 213 mm), now in a PC in Germany. It is an undated astrolabe made with a single plate for the latitude of 26°, roughly that of Jodhpur. On the crown is engraved: *oṃ oṃ raṇakuṃjalāla.*[37]

Rahīm Bakhsh, the artisan (*kārīgara*) who fabricated the unique Gurumukhī /Punjabi astrolabe, designed by *Jotisī* **Rishīkesh** (s.v.) in 1850, for Mahārājā **Narindar Singh** of Patiala.

Rāghavajit, *Jyo[tirvid]*, son of **Daivajña Viśvanātha**, of Surat (Sūryapura), owner of an astrolabe made in 1669. Rāghavajit also copied in 1668 Mahendra Sūri's *Yantrarāja* on the astrolabe. In the early twentieth century, the astrolabe and the manuscript were owned by R. K. Raikva of Surat, who published the illustrations of the astrolabe in his edition of Mahendra Sūri's *Yantrarāja.*[38] Subsequently, the astrolabe seems to have been offered for sale. Photographs in the archives of the Museum of the History of Science, Oxford. Inscription on the back of the crown:

śā 1591 pra[thama]
ā[ṣāḍha] śu. 7 bhṛgau kṛtaḥ
daivajña śrī viśvanātha-suta
jyo. rāghavajito yaṃtrarājaḥ

'Made on *Śaka* 1591 first *Āṣāḍha*, bright half, seventh day, Friday (= 5 July 1669), this astrolabe is of (belongs to) *Jyo[tirvid]* Rāghavajit, son of *Daivajña* Viśvanātha.'

Rāmacandra, Jośī, made, at the instance of Rao Bahadur **Keśarīsiṃha** (s.v.), the ruler of Kuchaman, a crude imitation of the European diptych dial in wood (220 x 135 x 20 mm) and incorporated a *phalaka-yantra* and a *dhruvabhrama-yantra* on the outer surfaces of the two plates. The instrument is not well preserved and the inscriptions on it are partly obliterated. On the inner surface of the lower plate is partly visible *sa[ṃ]vat 1941 phā[lguna]* (February/March) 1885) which must be the time of manufacture. On the inner

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37 Described and illustrated in Sreeramula Rajeswara Sarma, 'Indian Astronomical Instruments in German collections,' *op. cit.*

38 Kṛṣṇaśaṇkara Keśavarāma Raikva (ed), *Yantrarāja of Mahendra Sūri, together with the commentary of Malayendu Sūri and Yantraśiromaṇi of Viśrāma*, Bombay 1936.

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surface of the upper plate can be seen *rāvabhādurajī Śrī (?) 108 śrī keśarī siṃhajī karājemaṇ josī rāmacaṇdraṃ*, "Rao Bahadur the glorious Keśarīsiṃja-jī caused it to be made (?) [by] Jośī Rāmacandra." The same person appears to have made another diptych (17 x 11 x 2 cm) dial which carries no date or name but strongly resembles the former in style and workmanship. On the outer surfaces of this diptych dial are incorporated a *dhruvabhrama-yantra* and a sine quadrant. [39]

Rāmanātha, *Jyotirvid*, made a *dhruvabhrama-yantra* (272 x 232 mm) in vs 1884/ AD 1827 at Kota in the reign of **Kiśorasiṃha** (s.v.) who ruled from 1819 to 1827. Science Museum, London. Inscription engraved above the horizontal slit at the top and continued on both sides of the slit (Figure 4):

śrīgurave namaḥ ।
śrīmat kiśorasiṃhasya rājye yaṃtram idaṃ kṛtaṃ ।
jyotirvid-rāmanāthena koṭākhye nagare vare ।।1।। [metre: *Anuṣṭubh*]
saṃvat 1884 pauṣe māse śukle pakṣe 2 guruvāsare ।। śrīḥ ।।

'Salutation to the glorious preceptor. This instrument was made in the kingdom of the glorious Kiśorasiṃha by *Jyotirvid* Rāmanātha in the excellent city by the name of Kota, in *Saṃvat* 1884, on Thursday, the second [day] of the bright half of *Pauṣa* month (= 20 December 1827). Glory.'

Rāmapratāpa, artisan (*śilpin*), made an astrolabe which was designed by **Gaṅgāsahāya** (S.V.) in 1795.

Rāmayatna Ojhā, owner of a unique astrolabe (diameter 202 mm) with *Kaṣapayādi* notation, now at the Varanasi Sanskrit University. His name is engraved on the obverse side of the crown.[40]

Rāmasiṃha, ruler of Kota from 1827 to 1866, who was patron for an astrolabe made by the son of **Vaijanātha** (s.v.) in 1834.

Rishīkesa, *Jotiṣī*, who in 1850 designed an astrolabe with a diameter of 195 mm, which was made by the artisan **Rahīm Bakhsh**, on the order of Mahārājā **Narinder Singh** of Patiala (r.1845-1862).[41] The labels are in Gurumukhī script and Punjabi language.

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39 The two instruments are now with Tesseract, Early Scientific Instruments, Hastings-on-Hudson, NY, USA.

40 Cf. Sreeramula Rajeswara Sarma, 'Kaṣapayādi Notation on a Sanskrit Astrolabe,' *Indian Journal of History of Science*, 34 (1999) 273-287; reprinted in: idem, *The Archaic and the Exotic, op. cit.*, pp. 257-272.

41 Described and illustrated by Sreeramula Rajeswara Sarma, 'Indian Astronomical Instruments in German Collections,' *op.cit.* 257-272.

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Until recently the astrolabe was in a private collection in Germany. PLU. The inscription engraved inside the shadow squares and continued below them:

śrī mahārāje rājagāna mahārā-
jedhirāja rājeśvara mahārāje nareṇdrasiṇgha ma-
hīmdra bahīdra jī ke huha(sic! read *ka*)*m so yahu jaṇtrarāj ba-*
ṇāyā ॥ *sarkār paṭiyāle kī mo* ॥ *saṃbat*
1907 caitra sudī 1 brahasapatibār.
banāūṇe vāle jotasī sī Rikhīkes
kārīgar Rahīm Bakhas

'This astrolabe was made on the order of Mahārājā Rājagāna Mahārājedhirāja-rājeśvara-mahārāja Narendra Siṃha Mahīndra Bahādur, under the seal (*mo[har]*) of the Government of Patiala, on *Saṃvat* 1907 *Caitra sudi* 1 Thursday (=Thursday 14 March 1850). The person who got it made (i.e. who designed) is *Jotishī Śrī* Rishīkesh, and the person who made it (*kārīgar*) is Rahīm Bakhsh.'

Lakṣmīnārāyaṇa, master artisan (*ustāda*), of Kuchaman in Rajasthan, constructed four astrolabes in 1883, 1887, 1902 and 1903 respectively. The last two are the very last traditional astrolabes made in the twentieth century. Interestingly there is a close resemblance in the text of the inscriptions on (i) and (iv) on the one hand and (ii) and (iii) on the other. Also (ii) and (iii) were designed by **Jayakṛṣṇadāsa**, while (i) and (iv) were designed by his son **Haridatta**. In all the four cases, *kṛtaṃ* was used in the sense of 'designing'.

(i) Astrolabe with four plates, diameter 333 mm, formerly in the private collection of Leonard Linton,[42] now probably in Ar-Riyadh. The inscription within the shadow squares at the back reads:

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42 Leonard Linton, *Collection Leonard Linton et de divers amateurs, op. cit.*, No. 183, pp. 126-127. The catalogue is excellently produced, but the person who was consulted on Sanskrit instruments, had insufficient grasp of the language and translated the inscriptions with ludicrous results. The front of the astrolabe is illustrated on p. 127. On p. 126 the inscription is reproduced and translated, quite erroneously, thus: 'In the kingdom of Śrī Keśarīsiṃhajī [of the] great kingdom of Rābabahāṣṇarjī, this instrument resembling the moon [was] made by Haridatta, son of astronomer Jayakṛṣṇa, [forged named] Lakṣmīnārāyaṇa.' *Saumya-yantra* is the technical term for the northern astrolabe and not an 'instrument resembling the moon'! The description concludes with this erudite remark: 'The maker of the astrolabe was presumably named after the astronomer Haridatta who, according to a tradition in Kerala (southern India), was the author in A.D. 684 of an astronomical treatise, *Grahacāranibandhana*.' Surely thousands of persons must have borne the name of Haridatta during the twelve hundred years between 684 and 1883 and in the vast stretch of land between Kerala and Kūcamaṇa!

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mahārājya (sic! read *rāja*) *śrī-keśarīsiṃhajī rājye saimya* (sic! read *saumya*)*yantram idaṃ śrījyotirvij-jayakṛṣṇātmaja-haridatta-kṛtaṃ ustā[da] lakṣmīnīrāyaṇa saṃbat 1940 śake 1805 miti śrāvaṇa-kṛṣṇa-daśamyāṃ 10 ravau ||*

|| kūcamaṇamadhye ||

'In the kingdom of (Rāo Bahādur-jī, a British colonial title that was scratched out in favour of a grander title 'Mahārāja' which was, however, spelt incorrectly as 'Mahārājya') *Mahārāja Śrī* Keśarīsiṃha, this northern astrolabe (*saumyaṃ yantram,* lit. northern instrument) was designed (*kṛtaṃ*) by Haridatta, son of the astronomer Jayakṛṣṇa, [and was made by] the master artisan (*ustāda*) Lakṣmīnīrāyaṇa. *Saṃvat* 1940, Śaka 1805, Sunday, the tenth day of the dark half of the month of *Śrāvaṇa* (= Sunday, 29 July 1883). In [the city of] Kuchaman.'

(ii) Astrolabe with a single plate to serve 27° (Kuchaman, Jaipur, Agra etc.), d. 220 mm, vs 1944/AD 1887, Sanjay Sharma Memorial Museum and Research Institute, Jaipur. Within the shadow squares and below, it is engraved the maker's signature which runs thus:

josī jayakṛṣṇadāsajī kṛtaṃ.
uratā (sic! read: *ustā*[*da*]) *lakṣmīnārāyaṇena yu* (sic! read: *su*) *saṃpāditaṃ.*
paṃ. jyotirvid audīcya mahādevastanu (sic! read: °*sūnu*)
acaleśvarakasya yaṃtrarāja.
kucāmaṇi.

'Designed by the astrologer Jayakṛṣṇadāsa-jī, well executed by the master artisan Lakṣmīnārāyaṇa, this *yantrarāja* belongs to Acaleśvara, son of the *Audīcya* Brahmin, *Pandita Jyotirvid* Mahādeva. [The astrolabe was made in the city of] Kuchaman.' On the left of the shadow box is written *Saṃ. 1944*, which corresponds to AD 1887.

(iii) Astrolabe with a single plate to serve 27°, d. 219 mm. It carries the year [vs] 1959 = AD 1902. PC, Paris. The inscription reads thus:

jośī jayakṛṣṇadāsajī kṛtaṃ
ustāda lakṣmīnārayaṇena susaṃpāditaṃ |
paṃ. jyotirvida audīcya mahādevasūnu-acaleśvara
kasya yaṇtrarāja
kūcamaṇi

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'Designed by the astrologer Jayakṛṣṇadāsa-jī, well executed by the master artisan Lakṣmīnārāyaṇa, this astrolabe belongs to Acaleśvara, son of the *Audīcya* Brahmin, Pandit, *Jyotirvid* Mahādeva. [The astrolabe was made in the city of] Kuchaman.'

(iv) Astrolabe, single plate to serve 27°, diameter 244 mm, vs 1960/AD 1903, Skinner (Auction 13 April 2002):[43]

> *rāvabahādura-mahārāja-śrī-serasiṃhajī-rājye jyotirvij[j]ayakṛṣṇātmaja-haridatta-kṛtaṃ saṃ 1960* । *kārtika śukrā* (sic! read *śukla*) *6 cāndravāsare ustā[da] Lakṣmīnārāyaṇa kucāmaṇamadhye* ॥

'In the kingdom of Rao Bahadur *Mahārāja* the glorious Serasinha (Sher Singh), this astrolabe was designed by Haridatta, son of astronomer Jayakṛṣṇa, [and was made] by the master artisan Lakṣmīnārāyaṇa. *Saṃvat* 1960, Monday, the sixth day of the bright half of *Kārtika* (= Monday 26 October 1903) in Kuchaman (*Kucāmaṇa*).'

Līlānātha ***Jyotirvid*** owned, at a later point, the astrolabe which was commissioned by **Maṇirāma** (s.v.) in 1644 and which is now at the Royal Scottish Museum, Edinburgh. After acquiring it, Līlānātha got the following inscription engraved below Maṇirāma's inscription: *līlānāthajyotirvido 'yam*, 'This [astrolabe is] of Līlānātha *Jyotirvid*.'

Viśvanātha, *Daivajña*, father of *Jyotirvid* **Rāghavajit** (s.v.), for whom an astrolabe was made in 1669.

Vīrajī, Paṇḍyā, father of Paṇḍyā **Premajī**, for whom two *dhruvabhrama-yantras* were made by Sonī **Morārajī** (s.v) in 1815.

Vaijanātha's son (probably designed and) engraved (*aṅkita*) a silver universal (*nikhila-viṣaya-yogya*) quadrant called *yantra-cintāmaṇi* ('wishing-gem of an instrument') at Kota, in Rajasthan, at the instruction of the ruler **Rāmasiṃha** (s.v.), who presented it to the Government of India.[44] PLU.

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43 Skinner, *Science & Technology, featuring Mechanical Music* (Auction Catalogue), sale 2133, 13 April 2002, Bolton, no. 239, p. 37: 'Major K. D. Erskine, *Imperial Gazetteer of India*, Provincial Series, Rajputana, Calcutta 1908, p. 198, states that the then Ṭhākura of Kuchaman, Sher Singh, was a member of the State Council and Rao Bahadur; this confirms his title in the inscription.'

44 Cf. J. J. Middleton, 'Description of an Astronomical Instrument presented by Raja Ram Singh of Kota, to the Government of India,' *Journal of the Asiatic Society*, Calcutta, NS 32 (1830) 831-838.

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saṃvat 1891 śake 1756 Āṣāḍha śukla 7 ravivāre ||
jayati jagati koṭādhīśvaro rāmasiṃhaḥ
paraguṇagaṇabhājā tena saṃcoditena |
nikhilaviṣayayogyaṃ vaijanāthasya jenā (sic! read: *thātmajenā*)
ṅkitam idam iha yaṇtraṃ yantracintāmaṇistham ||/|| [metre: *Mālinī*]

'On Sunday, vs 1891, *Śaka* 1756,*Āṣāḍha śukla* 7(= 13 July 1834). Victorious in this world is Rāmasiṃha, the lord of Kota! Instructed by him, who appreciates the virtues in others, Vaijanātha's son made (*aṅkita*) this instrument called *Yantracintāmaṇi*, which can be used at all latitudes.'

Śivadatta (see Śyudatta).

Śivalāla, the artisan (*śilpin*), made a large astrolabe which was designed by **Gaṅgāsahāya Śiśuka** (s.v.) in 1870.

Śyudatta (=Śivadatta) made an astrolabe for **Mannālāla** (s.v.) at Jaipur.

Sakhārama Jośī, according to Shankar Balakrishna Dikshit,[45] made the following instruments between the years 1790 and 1796 : (i) astrolabe for the latitude of Saptarṣi (Satāra) at 17.42° in *Śaka* 1718/1796 A.D. with 27 stars positions marked on the rate, (ii) astrolabe for the latitude of Karavīra (Kadalī) at 17.21°, (iii) quardrant, (iv) *phalaka-yantra* and (v) *dhruvabhrama-yantra*. These were with the great-grand son of Sakhārāma Jośī at Kadeguddi, near Belgaum, Sahapur Taluka, in 1896.

Salīma-sāha (Salīm Shāh), Mughal Emperor Jahangir, during whose reign **Caṇḍīdāsa** (s.v) got an astrolabe made for his son **Dāmodara**.

Sāha-jahā, Shāh Jahān, Mughal Emperor, in whose 11th regnal year **Murārajī** (s.v.) made an astrolabe at Varanasi.

Sūryamalla, architect (*sūtradhāra*), made a single plate astrolabe, with a diameter of 270 mm. It is stated that the astrolabe was meant to serve the latitude 28:16°, possibly that of Delhi, although its traditional value is 28;39°. The astrolabe was on sale at the Libraire Alain Brieux, Paris, in 1994.[46] PLU. Inscription under the shadow squares

45 Shankar Balakrishna Dikhit, *History of Indian Astronomy*, English translation of his Bhartiya Jtotis-Śāstra, by R.V. Vaidya, Delhi 1981, Part III, p. 233 n.
46 Catalogue September 1994,

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akṣāṃśā[ḥ] 28\16 *akṣabhā 6\30*

idaṃ yantraṃ kastaracandrasyopadeśena sūtradhāra-sūryamallena kṛta[m] ||1||

'Latitude 28;16° Equinoctial shadow 6\30

'This instrument was made by the architect (*sūtradhāra*) Sūryamalla according to the instructions of Kastaracandra (sic! **Kastūrīcandra**).'

Scrasiṇha (Sher Singh), Rao Bahadur, ruler of Kuchaman, during whose reign the master artisan Lakṣmīnārāyaṇa (s.v.) produced an astrolabe in 1903.

Haranātha, Josī, of Burhanpur, who probably owned the astrolabe, which was made by **Ṭhākura Murārajī** Kuarajī (s.v.) at Varanasi in vs 1695/AD 1638. The inscription on the back of the crown proclaims his ownership thus:

josī haranātha vāṃchaḍā buhurānapurīṇo yantrarāja.

'This astrolabe belongs to Josī Haranātha Vāṃchaḍā of Burhanpur.'

Haridatta, s.o. *Jyotirvid* **Jayakṛṣṇa**, designed two astrolabes which were executed by Ustāda **Lakṣmīnārāyaṇa** (s.v.) in vs 1940/AD 1883 and vs 1960/AD 1903 respectively.

Hṛṣīkeśa, *Jyotirvid*, of Kūrmācala (Kumaun). His name is engraved on a reworked Arabic astrolabe with a diameter of 123 mm, originally made by Wafā' ibn Munajjim in AH 1017/AD 1608. The limb of this astrolabe was ground and a scale with Devanāgarī numerals was engraved on it. At the back a shadow square was added with Sanskrit labels and Devanāgarī numerals. Additions in Sanskrit were also made on some of the five plates. Formerly it was in the private collection of Leonard Linton.[47] Now it is said to be in the Museum of Islamic Art at Doha in Qatar. When the astrolabe was reworked with Sanskrit labels, around the lower part of the rim, the following inscription was engraved:

svasti śrī-kūrmmācalīya-hṛṣīkeśa-jyotirvidāṃ śrī-mantrarājo (sic! read *yantrarajo*)*-vino* (?) *vālādattātmajasyārtham* ||

47 Leonard Linton, *Collection Leonard Linton et de divers amateurs*, op. cit., No. 179, pp. 121-123. Cf. Sreeramula Rajeswara Sarma, '*Yavana-yantra* to *Yantrarāja*: Reworking of Arabic Astrolabes in India,' *op. cit.*

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'Let it be auspicious. Of the astrologer Hṛṣīkeśa of Kūrmācala (Kumaun), the glorious astrolabe (ie. The astrolabe belongs to Hṛṣīkeśa of Kūrmācala) ... for the sake of Bālādatta's son.'

It is likely that Hṛṣīkeśa got this astrolabe reworked. The middle part of the inscription is undecipherable and therefore it is not clear how Hṛṣīkeśa is connected to Bālādatta's son.

Hṛṣīkeśa, *Jyotirvid*, made a *yantracintāmaṇi*, for the sake of **Caṇḍīdatta's son.** Adler Planetarium, Chicago, radius 141 mm.[48] Inscription on the observe side, above and below the centre:

palabhā 7/1 carakhaṃḍāni 70/56/23

śrījyotirvid-dhṛṣīkeśanirmito yantracintāmaṇiḥ śrīcaṇḍīdattātmajasyārtham.

'Equinoctial shadow 7/1. Ascensional differences 70/56/23.

'The *yantracintāmaṇi* was made by the glorious *Jyotirvid* Hṛṣīkeśa for the sake of Caṇḍīdatta's son.

ACKNOWLEDGEMENTS

It is my pleasant duty to express my sincere gratitude to the museum authorities and private collectors for allowing me access to their instruments which are discussed in these pages. I am also grateful to Professor Takao Hayashi, Doshisha University, Kyoto, for reading an earlier draft and for making valuable suggestions.

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48 David Pingree, *Eastern Astrolabes*, Adler Planetarium, Chicago 2009, pp. 206-207.

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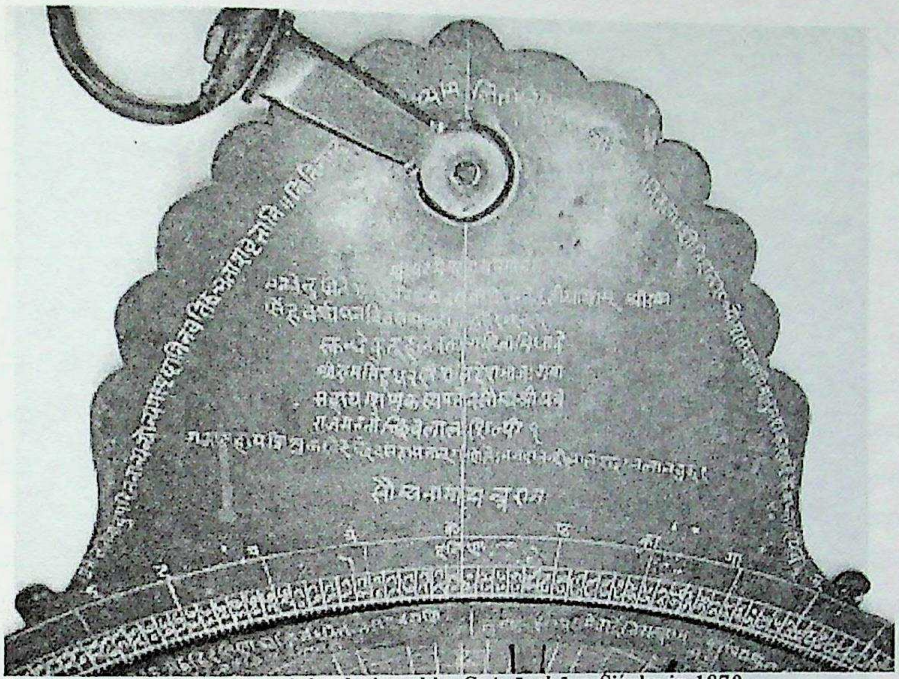

Fig. 1 Astrolabe designed by Gaṅgāsahāya-Śiśuka in 1870
Photo courtesy Science Museum, London

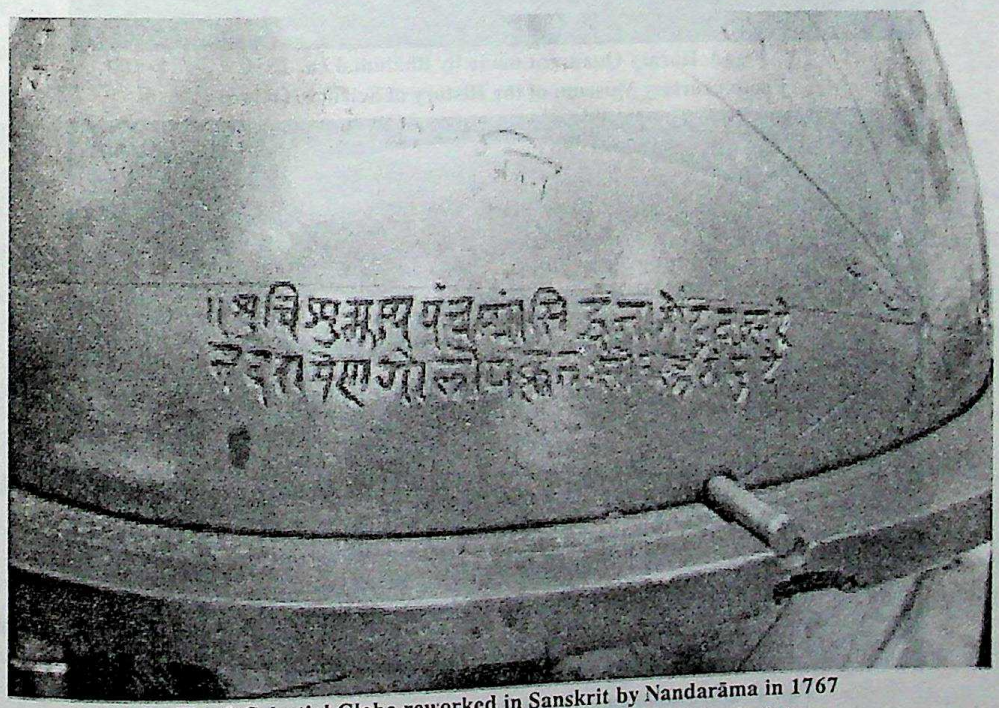

Fig. 2 Celestial Globe reworked in Sanskrit by Nandarāma in 1767
Photo courtesy Nasser D. Khalili Collection of Islamic Art

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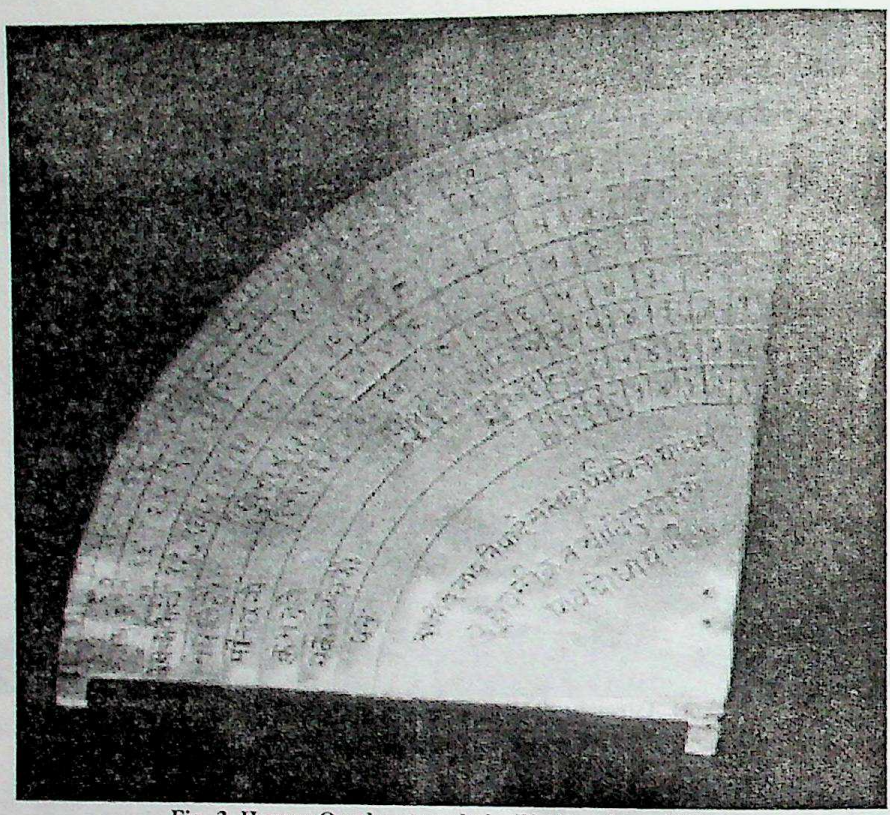

Fig. 3 Horary Quadrant made by Bhālūmal ca. 1850
Photo courtesy Museum of the History of Science, Oxford

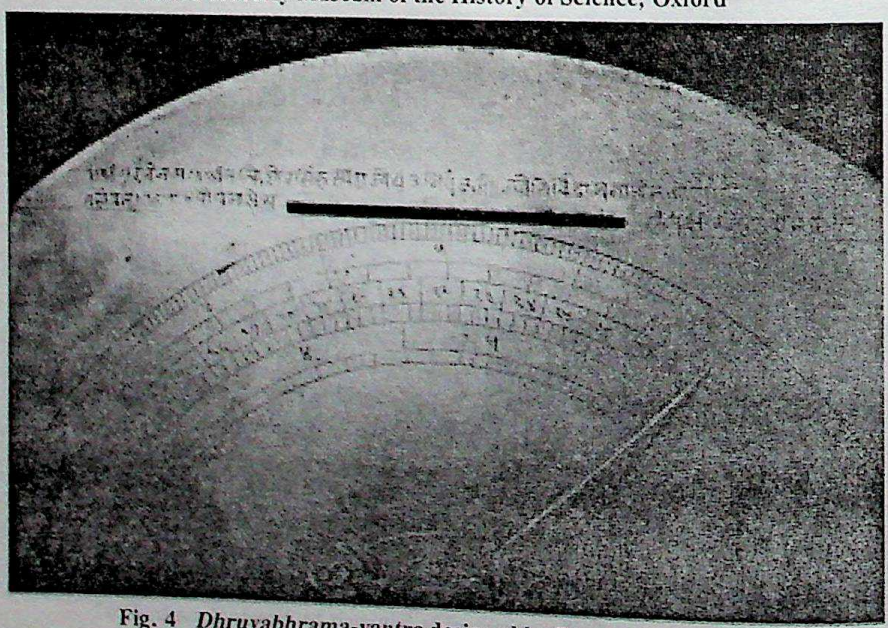

Fig. 4 *Dhruvabhrama-yantra* designed by Rāmanātha in 1827
Photo courtesy Science Museum, London

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THE ARKAPRAKĀŚA OF RĀVAṆA - A RARE WORK ON MEDICINAL EXTRACTS, USEFUL FOR CURING DISEASES

M. L. Wadekar*

Introductory:

The Sanskrit literature is very ancient and extensive, encompassing numerous topics of great interest. It not only contains the enormous Vedic literature of great antiquity, but also the entire field of Earlier, Medieval and Modern Classical Sanskrit Literature that is interesting due to the employment various sentiments and Realistic depictions of the Modern world. There is also inscrutable and secret philosophical and Shastric literature in the form of Upaniṣads, texts of schools of Indian Philosophy, the commentaries and manuals. Besides these works of Classical and philosophical interest, there are treatises of technical and scientific nature in Sanskrit literature. In the modern age of Science and technology, the Sanskrit treatises on *Vāstuśāstra, Śilpaśāstra*, Astronomy, Mathematics-Algebra, Geometry, *Āyurveda, Yoga* and psychology are being seriously studied by scholars, being useful even in this modern world.

Āyurveda- a harmless curing method:

Generally, the three methods of curing diseases are well-known- the *Āyurveda*, Homeopathy and Allopathy. Among them, the *Āyurveda* is the most ancient method in prevalence in India right from the Vedic period. The sustained application of it gives rise to everlasting effects, without generally resulting in any side-effects. It not cures the diseased person but also brings about permanent harmony in the metabolism. Medicines are generally more from the herbal and natural resources, easily to be absorbed by the body. This method is, therefore, becoming more popular among Indians and foreigners also. The works of *Āyurveda* are of prime importance nowadays.

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Arkaprakāśa - A work on extracts of substances:

It is, therefore, proposed to introduce a rare and less-known Ayurvedic work in Sanskrit named *Arkaprakāśa* in this paper. The word *Arka* means extract. It is, thus, the work throwing light on the extracts of substances- medicinal herbs, metals etc., which are not only useful for curing diseases, but even conducive to the nourishing of the body. It is curiously ascribed to Rāvaṇa, whose authorship is evidently imaginary. It is in the form of dialogue between Rāvaṇa and Mandodarī. It is divided in ten *Śatakas*(Chapters) and contains about 1000 verses. The text with Hindi translation and Hindi Commentary is published by Shri Venkateshwar press, Mumbai in 1906. The text is edited with Hindi Translation and the Hindi commentary by Shaligram Vaishya of Murshidabad. The editor/ translator notes that it is edited on the basis of one Palm leaf Manuscript in *Uḍiyā* script and its date is about *Saṁvat* 1207 i.e. 1151 A.D.

Summary of Contents:

The text begins with salutation to Śiva. The benedictory stanza is as follows:

भालचन्द्राय शान्ताय श्वेतवर्णाय शम्भवे।
कालकालाय नीलाय पार्वतीपतये नमः ।।१ ।।

The first chapter begins with dialogue between Rāvaṇa and Mandodarī. Madodarī is pregnant and due to the burden of the pregnancy, she is very much fatigued. She asks Rāvaṇa about some remedy by which the child in the womb can be properly nourished and her health may not diminish. On this Rāvaṇa narrates his dialogue with Parvatī. Once Rāvaṇa asked Pārvatī about the secret of Her two sons- Gaṇeśa and Kārtikeya, who are having tremendous power. Pārvatī replies Rāvaṇa that both of them are her mind-born sons and are celibate. On listening to this, Rāvaṇa decides not to marry and remain celibate forever. To this, Pārvatī does not agree and informs him that he would get divine power. She instructs him about some medicinal herbs by which he can obtain physical strength and mental power. Hence in the first Chapter of hundred verses, there is description of different kinds of herbs, their kind, their five parts- root, stem, leaves, fruits, flowers, Nature of different substances, the procedure of preparing their abstracts, the apparatus for preparing the abstracts etc. all such topics are narrated. The herbs are said to be of five kinds- *Latā*- creeper(e.g. *Gaḍucī)*, *Gulma*- cluster of trees (e.g. *Parpaṭaka*), *Śākhin*-having branches(e.g. *Āmra*-mango), *pādapa*- stretching wide with their roots(e.g. *Vaṭa*- banyan, *Aśvattha*-fig tree etc), *prasara*- spreading on the ground(e.g. *Kaṇṭakārī*).

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औषध्य: पञ्चधा ख्याता लतागुल्माश्च शाखिन:।
पादपा: प्रसराश्चेति तेषां वक्ष्यामि लक्षणम्।।
गडूच्याद्या लता: प्रोक्ता गुल्मा: पर्पटकादय:।
आम्राद्या: शाखिनो ज्ञेया वटाश्वत्थाश्च पादपा:।।
कण्टकार्यादिका: सर्वा: प्रसरा इति कीर्तिता:।
तेषां पञ्चैव चाङ्गानि प्रबलानि यथाक्रमम्।।
पत्रं पुष्पं वल्कलं च फलं मूलं क्रमेण च।

The *Dravya* or substance is an assemblage of *Rasa* (juice), *Guṇa* (quality), *Vīrya* (strength), *Vipāka* (effect) and *Śakti* (Capacity). *Rasa* (juice) is of six kinds- *Svādu* (sweet),*Āmla* (sour),*Lavaṇa* (salty),*Tikta* (bitter),*Kaṭu* (punjunt), *Kaṣāya* (astringent)- each earlier more powerful than the later. The *Kalpa* (medicinal preparation) prepared from the substances are also of five kinds.-*Kalka* (paste), *Cūrṇa* (powder), *Rasa* (juice), *Taila* (oily) and *Arka* (extract). Each later is more powerful and effective than the carlier. These are to be employed singly or jointly as per the necessity, considering the situation and the capacity of the individual. The author puts more emphasis on the *Arka* aspect. It is faultless and having much effectiveness. Its power has been proclaimed by Śiva himself.

द्रव्यकल्प: पञ्चधा स्यात्कल्कचूर्णं रसं तथा।
तैलमर्कं क्रमाज्ज्ञेयं यथोत्तरगुणं प्रिये।।
पृथग्द्वन्द्वे सन्निपाते संकरेऽसाध्यरोगिणम्।
क्रमादेते प्रयोक्तव्या: कालमग्निं निरीक्ष्य च।।
पञ्चमं दोषरहितं गुणसंघप्रकाशकम्।
पञ्चमस्य च सामर्थ्यं स्वयं पञ्चाननोऽब्रवीत्।।

It is enjoined that the *Arka* (extract),prepared on male weekday , on male *Nakṣatra* (constellation) and at daytime should be utilized for female persons and that which is prepared on female weekday, on female *Nakṣatra* (constellation) and at nighttime should be employed for remedy for male persons. The qualities of a substance are completely absorbed in the *Arka* (extract). The oil is to be used for externally shampooing the body, while *Arka*- an extract is to be utilized internally for drinking. If the healthy, the diseased or any other person makes demand for an extract, the Ayurvedic practitioner should first think about the place, time and strength and the weakness of the diseased and then prescribe the extract. The Astrological topic of the *Āturapraśna*- query about the diseased- is also delineated in this book.

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The second chapter deals with procedure of preparing extracts of five kinds substances. Like the extracts of herbs, there is also description of extracts of meats and wines. The third chapter has enumerated the extracts of different kinds of herbs and their remedy for various diseases. The fourth chapter has given details about extracts of different herbs, mixed together. In the fifth chapter, the different diseases like fever etc. and the remedy of extract for curing them is expounded. The seventh chapter contains the exposition regarding using extract for curing some acute and incurable diseases. The diseases of the eyes, ear, womb and the small children (padiatrics) can also be treated by the extracts. This is narrated in the seventh chapter. The Tantric practices of attraction (*Ākarṣaṇa*), aversion (*Vidveṣaṇa*), destroying (*Uccāṭana*), deluding (*Sammohana*) etc. can also be effected with the use of extracts. Certain extracts, which have some qualities of *Pācana* (digesting), *Dīpana* (increasing appetite), *Vātaghna* (destroying internal undue air), *Netrya* (increasing eyesight), *Pauṣṭika* (nourishing value) are enumerated in the ninth chapter. The tenth chapter specifically points out the use of extracts of various kinds of metals like gold, silver, copper etc. and the diseases that can be cured with remedial use of these extracts.

Conclusion:

Thus, the Ayurvedic work- *Arkaprakāśa* has highlighted in a very lucid and clear terms, the use of various kinds of *Arkas*- extracts of different substances in metrical form. The instruments for preparing extracts, the procedure for preparing it, the time, place and nature of diseased, partaking it æ all such topics are succinctly narrated. The story of disease-dispelling Śītalādevī and *Śītalāṣṭaka* in Her praise are also elucidated. Along with Ayurvedic medicines, the spiritual and psychological healing treatment is enjoined. The chanting of *Śītalāṣṭaka*, *Śītalāpañcākṣara* and *Viṣṇupañcākṣara* has a positive effect in curing diseases. The text narrates how the extracts of substances- herbs, meat, wine, metals and even poisons can be used for destroying diseases and nourishing the body. The doctors and the Ayurvedic practitioners should take note of and make use of, if possible of such an important, but small book of *Āyurveda*.

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PANDIT NAVAL KISHOR KĀŃKARA AND HIS WORKS : AN APPRAISAL

Satya Vrat Varma*

Born on July 10, 1910 at Jaipur in an orthodox *Brāhmaṇa* family, Pt. Naval Kishor Kāńkara was heir to a rich literary and cultural tradition. One of his forbears Pt. Shiv Shankar had the privilege to officiate as an *adhvaryu* at the *Aśvamedha* sacrifice performed by Swai Jai Singh, the founder of Jaipur. While his great grandfather was a Vedic Scholar of note, his father Pt. Jamuna Lal excelled in grammar and rituals.

The young Kāńkara was singularly fortunate in having received education from a galaxy of *Colossui*, who because of their phenomenal erudition in various disciplines, had earned for Jaipur the proud subriquet of *Aparā Kāśī*, the second Kashi, the ancient seat of Sanskrit learning. In accordance with the traditional system of Sanskrit education, he was trained in different disciplines ranging from Veda to Lexicon and Prosody by mighty scholars of the day. It was, however, his association with Pt. Madhusudan Jha, an extra-ordinary scholar of Vedic learning and interpretation, that turned out to be a high water-mark in his career. Pt. Jha was so fond of his brilliant pupil that he virtually transmitted his erudition to him, groomed him in a way that he emerged as a towering scholar, a faithful replica of his mentor. It is a measure of his hold on the Vedic language and its nuances that he composed the *mantras* in the Vedic language with a felicity that could be the envy of even the ancient sages. His knowledge of grammar, poetics, philosophy, lexicon, *Jyotiṣa* and *Karmakāṇḍa* was equally formidable. His writings bear it out in an ample measure.

Pt. Kāńkara excelled in prose-writing to the extent that he was compared with the great classical prose writers. His ornate and racy prose laced with the stock-in-trade

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*7/34, Purani Abadi, Near Namdev Flour Mill, Sri Ganganagar (Raj.)

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mannerisms and gimmicks doubtless evokes unstinted admiration from the dispassionate critic. Besides being a gifted writer in Vedic and Classical Sanskrit, he had deep love for his native dialect *Ḍhuṇḍhārī*. Of the works written by him in it, the epitome of Bāṇa's *Kādambarī* merits attention.

His wide erudition brought him a number of Awards and Honours. Sobriquets like *Śāstra-Mārtaṇḍa, Gadya-Samrāṭ, Kavi-Cakravartī, Mahāmahopādhyāya* conferred on him by various literary bodies speak volumes of his versatility. The President's Award and *Guru Gaṅgeśvarānanda Vedaratna Puraskāra* were a befitting recognition of his contribution to the literature of the land. All these and he plethora of formal degrees that he had earned over the years, however, fall short of his phenomenal erudition.

His death on April 29, 1996 at the ripe age of 86, marked the end of the long era of traditional learning and scholarship for which Jaipur has been so famous.

With his profound equipment Pt. Kāṅkara had the credentials to make valuable contributions towards enriching the Sanskrit language. His *Rāṣṭra-vedaḥ* and the *Yātrā-vilāsam* would do even a classical writer proud. An in-depth appraisal of his writings should be quite rewarding.

RĀṢṬRA-VEDAḤ

Commonly called *Pañcama Veda* to impart it high sanctity, the *Rāṣṭravedaḥ* (RV)[1] is by far the most conspicuous work of Pt. Kāṅkara. It proves beyond cavil that humble mortals of the contemporary era, like the sages of old, could also be spiritually inspired to envision the *mantras* and cast them in the sacred speech and metre of the Vedas. The RV sings the glory of the Moherland and salutes those who sacrificed their all to uphold 'her' dignity, besides focusing on the noble sentiments of patriotism and nationalism that sustain the nation. Though old in language, the RV is thus new in contents and tenor. There is hardly any work in the whole range of the contemporary literature that can make bold to equal it in augustness. One marvels at the author's phenomenal knowledge of the Vedas. To him the Vedic language is as effective a medium of expression as the Classical Sanskrit over which he has, as will be seen subsequently, the most enviable command.

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1. Vidya Vaibhava Bhavan, Ram Ganj, Jaipur, Year of publication not mentioned.

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The eleven hymns that make the RV are cast in the true Vedic mould. Each hymn has its own deity, and is couched in the Vedic metre, not precluding its sub-varieties, which are hardly used in normal writings. The occasion on which the respective hymns are to be chanted is also specified in the *Avataraṇikā*. The RV is imbued with the true Vedic aura, which is marked by palpable piety.

The first hymn aptly called *Śreyaḥ-sūktam*, consists of seven *mantras*. While Lakṣmī is the deity of the first *ṛk*, the six subsequent verses have Viṣṇu as their presiding deity. Viṣṇu is doubtless conceived as the Supreme Brahman, but it is his Puranic character that is sought to be projected in the hymn. It speaks of his cognizances (conch, disc, mace and lotus) and *pañcāmṛta-snāna*. The lord is invoked to bestow happiness and prosperity on the country, and thwart the enemy in his misadventure.[2]

Verses Three and Four bear the imprint of the corresponding *ṛks* of the *Viṣṇu-sūkta* of the *Ṛgveda* (I.154.3-4).

The *Guru-sūktam* purports to be a tribute to the author's preceptor, Pt. Madhusudan Jha, a matchless Vedist of his time, to whom he was deeply devoted. His indebtedness to his *guru* for all he has been able to achieve in life, is emphasized more than once. Pt. Jha has virtually been deified in the hymn. Living amidst the gods in the heaven, he commands respect from them all. It is because of his grace that the pupils win laurleds in the learned assemblies (3).

Composed of ten *ṛks*, the *Mātṛbhū-sūktam* is an expression of gratitude of the people to the Motherland. She is always solicitous of her offspring (*santāna*). She is so kind and loving that even the gods aspire to be born here to do their mite for her welfare (5). He who readily responds to the call of the duty and does not hesitate in sacrificing his life for its sake, is a true patriot.[3] The *Rāṣṭra-sūkta*, on the other hand celebrates in

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2. यं शिलष्यन्ती शुम्भते सा पराम्बा पर्जन्यं वा विद्युत्सुभगा मदन्ती ।
स्पृधः स्तभायन्नुदानड् भुवं द्यां विष्णुः स न स्यादवसेऽध पूर्वथा ।। *Śreyaḥ-sūktam*, 7

3. स नेज्जननीं सपर्यति वृषण्वसुः परिज्मा ।
यस्तुर्वणिश्च जागृविर्जिगाति क्रत्वे हवेषु ।। *Mātṛbhū-sūktam*, 6

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seventeen verses the greatness of this ancient land, and the tremendous progress it has made after its liberation from the alien yoke. The hymn lays great emphasis on its commitment to peace and social harmony. Because of its sound industrial base, self-reliance in agriculture, and well-equipped armed forces, the country is now a major power to reckon with.[4]

Of the hymns addressed to the political leaders, the *Gāndhi-sūktam* is a beautiful ode to the idealism and greatness of the Father of the nation. His unique feat of liberating the country without bloodshed and his extraordinary qualities are described in winsome phraseology. He has virtually been deified in Verse Four. Grant us wisdom. Destroy the enemies of the country. Consign the terrorists to hell.[5] This is a prayer better addressed to God. The *Indirā-sūktam* brings into focus the inspring leadership, political vision and firmness of Indira Gandhi that had been instrumental in bringing stability and prosperity to the country. Her eloquence that could silence the most garrulous opponents, also finds mention in the hymn.

The *Kṛṣaka-sūkta* is a tribute to the Indian farmer who forms the back-bone of the country's economy. He toils hard to feed his countrymen, though he himself lives in poverty. He is truly an *Annadātā*. The inviolability of fate is effectively hitghlighted in the *Diṣṭa-sūkta*. The last two verses enigmatically extol Maharaja Pratap and Shivaji *Mahārāja*. Verse Three turns focus on the miserable plight of the society.

Content-wise the *Abhīṣṭa-sūkta* is perhaps the noblest hymn in the RV. It means to be a father's blessing to his daughter as she leaves for her husband's house after marriage. In *ṛks* Four and Five, the author himself seeks blessings from his Guru Dātā Mahārāja so that he may carry on his literary pursuits unhindered. The hymn closes with a fervent prayer to God,[6] which is but an echo of the famed *Gāyatrī mantra* of the *Ṛgveda*.

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4. वप्सन्ति सं वीरासः प्रसुपः स्रिधो गोपीथे त्यं करामहे ।
अदब्धा देशवीतमाः।। *Rāṣtra-sūktam*, 13

5. विनाभिशस्तिमभिमातिहा रिपस्त्मन्या शविष्ठः क्रतुवित्तमः कपृत् ।
जगृभ्याद् गिरोऽस्मे तूतुजिर्मोहनः।। *Gāndhi-sūktam*, 4

6. महो राष्ट्रस्य धीमहि वरीयो द्युम्नवर्धनम् ।
धियस्तन्नः प्रशोधयात् ।। *Abhīṣta-sūktam*, 6

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With a view to resolving the abstruse language of the hymns, the author has written quite a detailed *Bhāṣya* on them, which, though scholarly, is thoroughly lucid and makes an enjoyable reading. He has interpreted and explained the text of the *mantras* with admirable clarity and authority, and has backed it up with excerpts from a large number of Vedic texts. He has addedly resolved almost all the intricate and not-so-intricate grammatical forms and other phrases and words, pressing into service his deep knowledge of grammar, *Nighaṇṭu* and *Nirukta*. While going through the auto-*bhāṣya* one is simply enthralled by the author's phenomenal erudition. The way he has interpreted some of the expressions and grammatical forms,[7] speaks volume of his deep insights in the nuances of the Vedic language and his grasp of the whole range of Vedic texts. Because of his equipment in Vedic language and exegetical skills, he can well compare with Sāyaṇa.

Pt. Kāṅkara was deeply versed in the science of Vedic prosody. Apart from the main metres, he is at home in handling their sub-varieties as well. He has used as many as twenty metres in the *Rāṣṭra-vedaḥ* which are as follows :

त्रिष्टुप्, भुरिक्, उष्णिक्, बृहती, निचृज्जगती, निचृत्त्रिष्टुप्, आस्तार पङ्क्ति, गायत्री, विराङ् गायत्री, अनुष्टुप्, जगती, पथ्या बृहती, परोष्णिक्, भुरिग्गायत्री, त्रिपाद्-विराङ्-गायत्री, महाबृहती, पथ्या पङ्क्ति, सती बृहती, ज्योतिष्मती जगती, अतिपात्-त्रिपाद्-गायत्री, सतः पङ्क्ति ।

ŚĀSTRA-SARVASVAM

The *Śāstra-sarvasvam* (SS)[8] means to present in the body of a number of studies of uneven size the essence of the *śāstras*. The title seems to overshoot the contents, as, far from the whole gamut of *śāstras*, the ŚS deals with some of the momentous issues pertaining to *Veda*, philosophy and poetics only. Though primarily intended for the beginner, the treatise is marked by depth and sobriety.

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7. त्रित त्रिषु लोकेषु अप्रतिहतवैदुष्यप्रभाव । यद्वा हे विस्तीर्णतमप्रख्यातकीर्ते । त्रिषु लोकेषु विद्यामहत्त्वेन तायमान वा हे गुरुवर्य । कृप्लवन-सन्तरणयोः (भ्वा.) धातोरौणादिकः कितच् प्रत्ययः । अथवा त्रि-इत्युत्तरपदे तनु विस्तारे (त.) धातोर्डः प्रत्ययः । त्रितस्तीर्णतमो मेधया इति निरुक्तम् (4/1/6) । हे त्रितमहर्षिस्वरूप । ... अथवा अग्निवीर्यादुत्पन्नानां त्रितसंज्ञकानामाप्त्यानां देवानां प्रतिरूप हे गुरो । ... सेयं श्रुतिकथा तैत्तिरीये ब्राह्मणे संकेतरूपेण पठ्यते । ... मैत्रायण्यामप्येवं लभ्यते ... सो (ऽग्निः) ऽपोऽङ्गारेणाभ्यपातयत् । तत एकतोऽजायत द्वितीयं ततो द्वितस्तृतीयं ततस्त्रितः (मै. स. 4/1/9) । एवं देवमहर्षिस्वरूप-प्रदर्शनेन गुरोर्महत्त्वम् आदरातिशयश्च ध्वन्येते । *Bhāṣya on Guru-sūktam*, 7. P. 20-21.

8. Ramesh Book Depot, Tripolia Bazaar, Jaipur, year not mentioned.

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Section One is by far the most remarkable part of the ŚS. It consists of nine perceptive studies on different aspects of the *Veda*, the ancient treasure of Indian wisdom. The essays are distinguished by the author's incisive study of the vast Vedic literature and the acumen in interpreting the various issues thrown up by it, in an innovative way.

From a critical analysis of the Saṁhitās of the *Yajurveda* and the *Śatapatha Brāhmaṇa*, the author comes to the conclusion in the first essay *Ṛṣivimarśaḥ*, that apart from its well-known meaning, the word *Ṛṣi* in the Veda, denotes four meanings : *Prāṇa* energy, Star, Seer of Truth (*tattva-draṣṭā*) and preceptor (*vaktā*). The sages were known as 'Seers of Truth' because they had envisioned the true nature of even those objects (*Brahman* etc.) that are beyond the reach of the senses. Though it were the 'Seers of Truth' that were the real 'Preceptors', but those of the sages who only communicated that Truth, were also called 'Preceptors'.

On decoding some of the verses from the Saṁhitās and Brāhmaṇas, they, as revealed in the study *Vaidika Vijñānam*, are found to refer to the theory of gravitation (p. 8), Rotation of earth on its axis and its revolving around the Sun (p. 10), vehicles that moved on land, water and in the sky (p. 11), precise cause of the solar and lunar eclipse (p. 14), Gynaecology (p. 16), Sources of Suns light and heat (p. 17). An amazing interpretation indeed.

Contrary to the general belief, *Vedatattvaṃ*, the next essay, makes bold to hold that the Saṁhitās, Brāhmaṇas, Āraṇyakas and Upaniṣads do not constitute the *Veda*. They merely unfold what the original (= real) *Veda* propounds. However, the true nature of the real *Veda* in revealed by the word *Veda* itself, which, as interpreted by the author, represents *Sat, Cit and Ānanda*. Combined together they stand for *Saccidānanda*'. This is *Brahman*, the true *Veda*, *Vedo Brahma* (4.11.4.3) as the *Jaiminīyopaniṣad Brāhmaṇa* puts it. Stretching the argument, the next study *Vaidika dṛṣṭayā pauruṣeyatvā-pauruṣeyatvavicāraḥ* holds that it is this *Veda* that is *apauruṣeya* (of divine origin). The Saṁhitās and the other treatises that propound *Brahma-vidyā* are clearly man-made (*pauruṣeya*).

The essay '*Yajñopavitavijñānaṃ*' purports to be a startling interpretation of the concept of the sacred thread. According to Pt. Madhusudan Jha, whose views the essay admittedly echoes, an intimate combination of fire in the form of Sun and Soma in the form of

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moon, constitutes the sacrifice in the form of year (*sāṁvatsarikayajña*). This sacrifice has three principal divisions : southern hemisphere (*dakṣiṇāyana*), Northern hemisphere (*Uttarāyaṇa*) and the equatorical circle (*Viṣuvadvṛtta*). These are occasioned by the Sun. The path on which the earth revolves around the Sun is called orbit (*krāṇticakra*). This orbit that determines the boundary of the sacrifice of the solar year, forms its chord. This chord consists of the three above-mentioned divisions. The *Yajñopavīta* which is synonymous with the sacrificial chord, is also made up of three strands. It is these strands that impart it fullness. The three strands of the *Yajñopavīta* thus represent *Daksiṇāyana, Uttarāyaṇa* and *Viṣuvadvṛtta.*

The essay '*Vedasaṁmatamāyustanmānañca*' makes an interesting point. In view of the fact that the average age of man in the Vedic period was 36000 days i.e. 100 years, the claims that sacrifices were conducted for thousands of years and penances were practised for hundreds of years, are hollow and baseless. In such cases, a year, according to the author's interpretation, stands for one day.

While the thrust of the essay '*Vedeṣu Varṇavibhāga*' is that the division of mankind into four classes (*varṇas*) is as old as the creation itself, it makes bold to extend the classification to the gods, and botanical and animal world as well. The gods are also grouped as Brāhmaṇas, Kṣatriyas, Vaiśyas and Śūdras.

The essay '*Vedeṣu Brāhmaṇastasya Mahattvam Ca*' seems to be a misfit in the section. More than the Vedic texts, it is on the basis of the *Manusmṛti* that it struggles to highlight the piety and greatness of *Brāhmaṇa.*

Section two on Philosophy is comprised of six well-written essays. Though interesting and instructive in their own way, they do not measure well with the aforesaid studies on *Veda.*

Though small in size, the essay '*Darśanāni trīṇi vā ṣaṭ*' is marked by a modicum of freshness. Contrary to the general consensus, Pt. Kāṅkara is of the opinion that *Nyāya, Yoga* and *Pūrva-mīmāṁsā* are not independent systems. It is only when clubbed with *Vaiśeṣika, Sāṁkhya* and *Uttara-mīmāṁsā* that they come to be treated as one system each. Thus he has ventured to reduce the six well-known systems of philosophy to three. It is when they are joined with the three aethestic systems that they number six.

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The essay "*Dārśanikadṛṣṭyā sṛṣṭikrame parameśvaraḥ*" makes an interesting study. The views of the different system of philosophy on the issue are discussed here in some detail. It is only in the *Advaita Vedānta* that God is unequivocally accepted as the efficient (*nimitta*) and material (*upādāna*) cause of the world (P. 61-62). Other systems either summarily deny His existence or have no use for Him in the process of creation as advocated by them. In "*Dārśanikānāmātmabrahmacintanam*" the author spells out in brief the views of all the Vedic systems of philosophy and various other schools on the nature of *Brahman* (*Paramātman, Īśvara*) and the individual soul, and their mutual relationship. It adds up to a handy compendium of the diverse views on the interesting subject.

"*Bhagavadgītā tadbhāṣyamatāni ca*" is by far the best study included in the Section. It presents in brief the views of the ancient commentators of the *Bhagavadgītā* (BG) and it modern interpreters on what forms its essence and what it seeks to teach. While Śaṅkara's view is well-known, Rāmānuja and Madhvācārya are of the opinion that though the BG advocates the blending of Knowledge and Action, it treats *Bhakti* on a higher plane than even Knowledge. Of the later exegesists, B.G. Tilak is convinced that the BG teaches us *Karmayoga* based on Knowledge and dominated by *Bhakti*. Pt. Madhusudan Jha, on the other hand, puts an altogether new interpretation on the *Gītā*. According to his analysis the 'Song Celestial' advocates four *yogas* : *Dharmayoga, Jñānayoga, Vairāgyayoga* and *Aiśvaryayoga*. They, practiced individually or collectively, lead to liberation from the worldly bondage.

Section three is devoted to the study of almost all the major concepts of poetics, mostly in accordance with Mammaṭa's *Kāvyaprakāśa* (*KP*). It spills over as many as one hundred pages and outstrips in size the two earlier sections taken together. But for the exhaustive critique on the classification of poetry, the ŚS includes in its ambit, almost all that Mammaṭa has dealt with in his masterly treatise. It follows Mammaṭa closely and may well be called a compendium of the *KP*. Because of its indebtedness to Mammaṭa, it can hardly claim to be original. Its originality lies in the lucid presentation of the subject. The critique is very useful for the beginner as it apprises him of almost all the important concepts of poetics in an intelligible language in contrast to Mammaṭa's inverted style and rugged expression.

The section is prefaced with a detailed essay on "*Sāhityasya Sārvabhaumarajyam*" which seeks to establish the supremacy of the *Sāhitya-śāstra* over almost all other disciplines including Grammar, Lexicon, *Yoga* and *Jyotiṣa*.

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Intended to set forth the tough 'śāstric subjects' in a lucid phraseology, the SS could hardly afford the luxury of indulging in poetic flourishes or the gimmicks inherent in Sanskrit prose. It is free, by and large, from complicated grammatical forms and lexical words. Still, one is confronted by such jaw-breakers as *Āndudolayiṣati* (P. 2), *Vyañjajiṣuṇā* (P. 2), *Cikhyāpiṣaya* (P. 5), *Titaniṣantaḥ*, (P. 46), *Pratyapīpadan* (P. 19), *Avarttiṣat* (P. 79), *Asosūcita* (P. 86), *Cikīrṣañcakāra* (P. 33), *Dedivīti* (P. 71), *Peprayīti* (P. 91).

YĀTRĀ-VILĀSAM

The *Yātrā-vilāsam* (*Yv*)[9] purports to be an exhaustive account of the author's pilgrimage to the holy Gangotrī in the Himalayas, which has fascinated the devout since time immemorial. The *Yātrā*, paradoxically carried out in old age, was as thrilling as it was ennobling to both the author and his wife. The intended visit to Gomukha was however, aborted by a terrific snow-storm, which forced them to take refuge with an ascetic in his nearby hermitage. The vicinity of the ascetic, turned out to be an elevating experience for them, which however was marred by his mysterious disappearance from the hermitage, leaving everybody there wonder-struck.

Adjudged as the best prose-writing in a literary contest, the *Yātrā-vilāsam* is written in an ornate style modelled on Bāṇa, and is therefore marked by a slew of gimmicks that distinguish the Sanskrit prose in no small measure. True to the character of the writings of its ilk, it is the form that dominates the contents in *Yv*. Though it is by no means poor in the latter. The author has been at pains to work up the array of features that form the warp and woof of the ornate prose. With formidable equipment at his command, he has perfected the art of writing ornate prose to the extent that he occasionally invites comparison with the ancient masters. The author's ability to handle the stock-in-trade gimmicks tends to lend a classical ring to his prose. It is this consciously chiselled prose that the travelogue has claimed.

As a travelogue, the *Yātrā-vilāsam* was supposed to abound in contents, but, true to the genius of a *gadya-kāvya*, it is infested with a host of descriptions of diverse phenomena. While the depiction of natural phenomena such as holy rivers, snowfall, hail-storm, pilgrimage-centres in the course of a journey to the hills was natural in a travelogue,

9. Vidya Vaibhava Bhavan, Ram Ganj, Jaipur, 1973.

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they betray substantial difference in their genius. If the outer trappings get the better of the description, it sinks into a stale exercise scarcely able to bring into relief the true character of the object sought to be described. The description of Delhi, as attempted in the Yv, stands out as a glaring example of the type. Instead of turning focus on the various monuments and other landmarks that impart it a distinct personality, the author chose to describe the metropolis with such gimmicks as *Parisaṁkhyā* and *Virodhābhāsa* (P. 15-18). The description of the Yamunā has strangely lapsed into an account of the physical beauties of the women who had supposedly flocked there to have a holy dip in the river (P. 13-14). The author seems to have an incorrigible fascination for the feminine charms. In describing even the holy Gaṅgā, he reverts to detail them[10] with evident glee as if there was nothing else to describe on its bank at Haridwar, Rishikesh or Svargāśrama. The description of Uttarakāśī is also cast in the trite mould. While its earlier part promises to be lively and seeks to highlight its religious importance, the latter part of it, is tarnished by the hackneyed gimmicks (P. 60-62).

However, when the author is able to release himself from the stranglehold of literary jugglery, and is focused on the phenomena under description, they emerge as winsome pieces baring their genius instantly. The scorching summer of the desert which prompted the author to undertake the arduous journey to the hills to find respite from its vagaries, is described forcefully in measured terms and lucid phraseology which serve to highlight its intensity with a vengeance.

परितः परमप्रतप्ति-वितरणायैव साहाय्यमिव कर्तुं परेतभर्तुरभितः प्रसारितकरः ..... जनमनो-विशोषणो मुहुमुहुः सर्वतः प्रज्वलितैरालातैः सर्वान् दिधक्षुरिव बिभ्रक्षुरिव आशिशुषुरिव जिगरिषुरिव प्रासरीसरीत् क्रमशो बहुलवाजः श्रीमान् निदाघराजः । (P. 3) एवम्भूते ग्रीष्मपरितापे न गेहे विश्रामः, नारामेष्वारामः, न शय्यायां कष्टविरामः, न नलदजवनिकासु शान्तिक्षणायामः .....प्रत्युत प्रचण्डतिग्मप्रश्वासैः समवर्धत हृदये प्रकम्पः । (P. 4)

The descriptions of the spring at Nīlakaṇṭha[11], snow-fall (P. 80), storm (87-88) and the toiling women and village belles (P. 11) are equally happy. They are uniformly lucid,

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10. क्वचित् सुशोभन - श्रोणि-श्लिष्ट-संकुचित-पादयामवसन-परमपिनद्ध-नितम्बण्डला-भोगत्वेनैवोपवेष्टुमशक्नुवत्यः (P. 18-19) पीवरपयोधरभर-भारभुग्नमध्यभागाः (P.19), सूक्ष्मपटीं परिदधानाः, चर्मपादुकाभ्यां पटपटाकुर्वत्यः (P.20), धरणीतललितलोत्तमाः (P.20), ... नवयुवककुरङ्गशावकसमूहान् बध्नन्ति स्म । (P.21)

11. तत्रारान्मन्दिरान्मण्डूककुलकलितहृदयः ... एकः स्वच्छजलधरो नातिविशेषाकारो निर्झर आसीत् । निस्सन्देहं सोऽयं निर्झरः प्रकृति-देव्याः स्वच्छमुकुर इव, प्रवहन् पारदप्रवाह इव, कैलासवासिनः शङ्करस्य विशदाट्टहास इव, जलरूपेण परिणतः कर्पूरपर्वत इव विराजमानः सर्वेषामस्माकं लोचनमहोत्सवोऽबोभवीत् । (Yv., P.47)

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forceful and realistic and serve to highlight the respective phenomenon with admirable clarity.

More than the trite phenomena, he excels in depicting the emotions that criss-cross the human breast under different situations. The long narrative offers him several occasions to turn focus on the human mind as it responds to various stresses and strains. The anguish of the author's wife at his injury sustained while negotiating the stairs (P. 32), his sorrowful reaction to the gory bus-accident and to the swoon of his wife (P. 73), are depicted with admirable sensitivity. While the description of his wife's agony reflects her restlessness and impatience in the situation, the author's reaction to the ghastly bus-accident is marked by grief at the untimely death of the hapless pilgrims, sympathy for their kin and anger at the driver's negligence (P. 66-67). The way the swoon of the author's wife caused by the hard journey and his fear and agony at the sudden development have been detailed in an accordant phraseology, invests the description with uncommon significance. It addedly bears testimony to the author's deep understanding of the working of the mind in exasperating situations. It is doubtless one of the most remarkable pieces in the Yv.[12]

The pen-pictures of the respective *dramatis personae* drawn in the Yv bespeak the author's expertise in the art. Attempted with keen observation and understanding of the persons under focus, they turn out to be their verbal replicas. This is how the holiness and spiritual powers of the *Siddha* ascetic Govardhana have been captured in charming phraseology.

नातिदवीयसाऽनेहसा च भीतिमथनं सिद्धायतनं प्रविश्य .... अस्माभिस्तत्र शीतभासां हिमद्युतिरिव, ज्योतिषां भास्वानिव, छन्दसां सामागम इव, पुरोधसां वसिष्ठ इव, विद्याजुषां धिषण इव, तपोजुषां भूषणभूतो .... जराजीर्णस्तपोवीरः .... निरतिशयशान्तिसंवर्धनो गोवर्धनो मुनिराजो लोचनगोचरीकृतः । किमन्यत्, परोपकारप्रवणोऽप्यात्मचिन्तनलीनः, संन्यासकृतादरोऽप्यनन्तश्रीविभूषितः, जितेन्द्रियोऽपि रामोपासनातत्परः । (P. 89)

He was indeed an epitome of penance, piety, spirituality, self-restraint and wisdom.

12. तनीयसी मदीया प्रेयसी मार्गश्रमातिवेलतामसहमाना चैतन्यं परित्यजन्तीव लोचने मनाङ् मीलयन्ती मूर्च्छाभिभूता भूता । ... तस्या अनया दशया त्वनर्थशतमाशङ्क्य मम तदानीमपच्यन्त इवाङ्गानि, अनश्यन्तेव सर्वेन्द्रियाणि, अभिद्यन्तेव समानि मर्माणि, अच्छिद्यन्तेव निखिलानि देहबन्धनानि, निरस्रियन्तेव प्राणाः, अक्रीड्यन्तेव वेदनाः, अलुप्यन्तेव च चेतनाः । (Yv., P.72)

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Notwithstanding the profound equipment in various disciplines that the author has brought to bear upon it, the prose in the Yv is neither involved nor over-burdened. It is couched for the most in lucid phraseology. It is distinguished at places by sweetness (*mādhurya*) and perspicuity (*prasāda*) which combine to heighten the beauty of the expression. Even the long compounds are not shorn of transparency, and hardly pose any difficulty in resolving them. However, the author seems to have unmitigated obsession with highly complicated grammatical forms and uncommon lexical words. His love for the Frequentative (*yaṅanta, yaṅ-luṅata*) forms and forms based on them knows no bounds. The Yv is menacingly infested, besides much else, with such intricate Frequentative, Desiderative and Aorist forms[13] as are hardly used in contemporary writings. They sound discordant in the situation and disturb the flow of the prose. His fascination for abstruse words is equally deterring.[14] Mercifully, he has explained them in the Foot Notes.

But for the stock figures of speech like *Parisaṁkhyā, Virodhābhāsa* and *Śleṣopamā*, the author is not overly fond of the *alaṁkāras*. *Utprekṣā* and *Upamā* are the natural features of the Sanskrit prose. Some of the imageries are impressive.[15] Alliteration runs through

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13. Some of them be noted here.

(i) Frequentatives : सासहयुः (P. 4), समजञ्जन्यत (P. 9), पेप्रियती (P. 25), अशेशयम् (P. 65), तन्ताहि (P. 72), अबोभूयिष्वहि (P. 74), अनंनमिष्महि (P. 90), समवरीवृधीषत (P. 99), अवेविदिषि (P. 104).

(ii) Aorist : अजिह्लदन् (P. 4), प्रासेस्रीयिष्ट (P. 7), अवतारिष्म (P. 62), समतापयिषत (कर्मणि. P. 77), न्यमीलिष्टाम् (P. 100).

(iii) *Taddhita* suffixes : औपकर्णिलोचनाः (P. 11), शौवस्तिकम् (P. 82), नैकटिकस्य (P. 88), पार्वतम् (P. 99).

(iv) Desideratives : प्रोर्णनविषुरिव (आच्छादयितुमिच्छुः, P. 3), संसिस्मयिषमाणेन (परिहसितुमिच्छुना P. 73), सुस्मूर्षिष्यन्ते (P. 77), षिस्पृहयिषिष्यन्ति (P. 77), तत्रासयिषन्ति (P. 85), प्रविव्राजयिषुः (प्रेषयितुमिच्छुः P. 91), मुमुषिषति (P. 92), समुपजिहसिषति (P. 92).

14. Some of them may be listed here : कंसः (पानपात्रम् P. 14), रेफाः (निकृष्टाः P. 17), जीवः (देवगुरुः P. 61), उन्मत्ताः (धत्तूरवृक्षाः P. 62), शोचिष्कोशः (अनलः P. 67), कायस्थः (हरीतकीवृक्षः P. 68), खजाका (दर्वी P. 69), पिष्टपचनेषु (ऋजीषेषु, Frying Pan P. 69), मलमल्लकम् (कौपीनम् P. 81), शयुः (सानन्दः, P. 87), नीशारः (प्रावरणम् Quilt, P. 100), म्लेच्छमुखम् (ताम्रम् P. 104), वरवर्णिनी (हरिद्रा P. 104).

15. (i) यत्र हि विश्रुतः शोणितदुर्गकूटः पवनान्दोलित-त्रैवर्णिक-ध्वज-तालवृन्तेन विशदगगनाङ्गनसञ्चलनक्लान्तं मित्रं बीजयन्निव दर्शकांश्चाह्वयन्निव शोभते स्म । Yv. P. 15. Yv. P. 48.

(ii) पश्चिमाकाशे च स्वल्पविभाभासितास्तारकाः स्वर्णाचलशिखर-संस्थित-मार्त्तण्ड-रथस्यायश्चक्रस्य सङ्घर्षणसमुत्थिता वह्निस्फुलिङ्गा इव व्यराजन्त । Yv. P. 48.

(iii) मुनिवरोपदेशाप्तवैराग्याणीव कमलकल्पकुसुमानि समकुचन् । Yv. P. 94.

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the length and breadth of the tract. *Ananvaya* and *Ullekha* are the two other important *alaṅkāras* used in the Yv.

Despite these trappings so natural to the Sanskrit prose, the Yv, makes a delightful study. It seeks to make up in its own way, the deficiency of the travelogues from which the Sanskrit language still suffers. The author's own assessment of the *Yātrā-vilāsam* is not off the mark.

प्रसादप्रासारा सरस-सुकुमाराऽतिमधुरा
सदर्थालङ्कारा सहसरुचिराश्लेष-सुकरा ।
सदा भव्या नव्या ललितपदविन्यासचतुरा
कृतिः सेयं धन्यान् युवतिरिव लोकान् रमयतु ।।

PATRA-SĀHITYAM

Letter-writing in Sanskrit as a genre of literature is doubtless a recent phenomenon. As a man of wide learning, Pt. Kāṅkara always corresponded in Sanskrit with the wide galaxy of his erudite friends and acquaintances across the country. Of the hundreds of letters written by him over the years, only eighty five could be salvaged from his archives through the heroic efforts of his grand daughter Shivangana Sharma. They span a period of six decades from 1932 to 1989. All these letters had been written to the traditional *Paṇḍitas* and religious saints and godmen. It is sad that the text of his letters to such luminaries as V. Raghvan, Kshama Rao, Mangal Dev Shastri, Mahalinga Shastri and MM. Damodar Satvalekar, is irretrievably lost. If had been preserved, the corpus could have shed valuable light on an array of important literary and cultural issues and events of that time.

An overwhelming majority of Pt. Kāṅkara's letters brought out under the rather prosaic title of *Patra-sāhityam*[16], purports to be personal in nature. They may not throw up many a issue of lasting interest but they touch upon a number of matters that could have otherwise sunk into oblivion. To top it all, they serve to turn focus on some of the facets of the author's personality, and the vicissitudes that he had to undergo in life. From meager means and humble beginnings, he emerged as a erudite scholar with a

16. Ed. Shivangana Sharma, Vidya Vaibhav Bhavan, Jaipur.

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reasonably satisfying job. The letters reveal that Pt. Kāṅkara had intimate equations with almost all the learned *Paitas* and scholars in the country. His reverence for religious saints is also well brought out in some of the pieces. The letters speak volumes of his commitment to learning.

A number of Pt. Kāṅkara's letters are couched in verse while the rest, forty eight to be precise, are in prose though some of them are also interspersed with a stray verse or two. The versified letters, like their prose counterparts, are moderate in size. Even the longest of them does not consist of more than fifteen verses. More than any thing else, the letters in verse bear testimony to the author's skill in prosody. He has used in them at least nineteen metres, ranging from the tiny *Anuṣṭup* to the mighty *Śārdūlavikrīḍita*. Though with 75 verses couched in it, *Āryā* emerges as the dominant metre in the corpus, the author has special fondness for the *Śārdūlavikrīḍita*. It is a measure of the author's skill in handling the metres that he used with equal ease the Hindi metres *Dohā, Soraṭhā* and *Caupāī* in quite a few verses. *Dohā* and *Caupāī*[16a] in particular have lent winsome rhythm to the verses.

Their utility as media of communication apart, Pt. Kāṅkara seems to treat the versified letters as hand-carts to ferry the cargo of his equipment in grammar. The way he has suffed these down-to-earth writing with mind-boggling grammatical forms smacks of a deep-seated complex. He is all too eager to use intricate Frequentatives, Desideratives, Aorist and *ṇamul*-forms even at places where they should have been shunned.

The letters are enlivened by simple *alaṅkāras* like *Anuprāsa* (I.4, 41.9 etc.). *Antyānuprāsa* (67.1-5). *Upamā* (II. 2; 38), *Rūpaka* (59. 1-4), *Utprekṣā* (57.1), *Svabhāvokti* (I. 2-3) and *Arthāntaranyāsa* (41.9, 44.5, I.4 etc.)

These outer trappings notwithstanding, the versified letters are couched, for the most, in lucid phraseology distinguished by smoothness and sweetness.

It is the prose that is author's *forte*. Some of his prose-letters have a better claim to be treated as literary pieces. He, as seen earlier, is well-equipped to turn out racy prose

16.a श्रीहरिरनिशं जयतु जगत्यां वर्षयतु स मे स्फूर्तिं मत्याम् ।
वितरतु काव्यकलां मेऽकम्पां कृत्वा मयि विपुलामनुकम्पाम् ॥
अहमिह गुरुवर ! कुशलं वर्ते निपात्य शरीराभीलं गर्ते ॥
श्वोऽत्र परीक्षाऽऽरब्धा भविता भवदनुग्रह एव मामविता ॥ (Letter 4)

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enlivened by pleasing rhythm and sound-effect. He has deep understanding of the working of the human mind, and can well describe the nuances of its response under strains or joys, in corresponding phraseology. The way he has detailed his own agony in some of the letters is truly touching. One can not but sympathies with him on hearing his woeful tale (Letter 17). The misery that overtook him in 1958 and left him a virtual wreck is detailed in such a moving language that it stirs one's heart to its moorings.

कथमपि तूष्णीभावमवलम्ब्य जीवामि । .... एकतस्तनयोद्वाहसम्पादनार्थं गरीयसी चिन्ताऽऽर्थिकी, अपरतो द्वितीयवारमपि बी. ए. - परीक्षाया आङ्गलसाहित्यपत्रेषु नैष्फल्यावाप्तिः, अन्यतश्चिरन्तन - चिन्तन - सुलभा चित्तचैतन्यापचितिः, अपरतः पत्न्या अपि बलवच्छारीरमस्वास्थ्यम्, सर्वतो ज्यायसी च क्षणे क्षणे सुरसास्यसमाना परिवर्धमाना ... कालेजतो निष्कासनभीतिर्मां चिखादिषति । .... अपि नाम मामविलम्बं मुञ्चेयुर्निष्करुणाः प्राणा येन प्रतिपलमेधमानयाऽनयाऽरुन्तुदपीडया तु मे वियोगः स्यात् । (Letter 25, P. 28-29).

The description of Svargāśrama, the place he visited alongwith his wife, stands in stark contrast to this woeful tale. It is perhaps the most lively piece in the corpus, detailed with the trappings inherent in the ornate prose (letter 38). The phraseology that Letters XXXV and XXXVI have evoked is unhappily intemperate. It is blunt and hurting.

Not unlike their versified counterparts, the prose-letters also have been given a sizable sprinkling of recondite grammatical forms of which the author is so fond of. They pertain to almost all the main sections of Sanskrit grammar. Some of the forms used by him are wild[16b] and are seldom used by sobre writers. The letters are interspersed with uncommon lexical words. Some of the expressions used in the letters sound odd or go against the genius of the language.

16.b Some of them are listed here :

(i) Frequentatives : वावाद्याः (XII.4), लालज्ये (XIV.2), सरीस्मरीमि (25), जेजीव्यास्तां (XXVII.2), लालम्येरन् (33), जेज्यूत् (49.4), विबोभुवति (XXVVIII.1), तन्तनीतुतराम् (43.4), जाज्ञीयुः (44.7), सोसूचीतु (77.12), दाधेतु (78.1), लालम्भीति (85), लेखिख्यै (57.5) नन्नमीमि (30.1).

(ii) Primary (*Kṛt*) suffixes :

(a) अरुन्तुदैः (25), पारदृश्वेभ्यः (32), वंशवदः (36), आनन्दथुः (38)

(b) णमूल् -लोकं लोकं (32), जायं जायं (38), चायं चायं (38), लेखं लेखं (46.7), कारं कारं (81), पायं पायं (48), ध्यायं ध्यायं (38),

(iii) Verbal Nouns (नामधातुः) षट्पदायन्ताम् (39.2), युगसहस्रायमाणान् (70).

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आङ्गलभाषायां लिखितवन्तः (XXXV), मुदाऽमोमुदम् (27), न कस्याचिदपि सुहृदो यथा समयं कुशलं पृच्छ्यते (32), अस्मदुपरि तु परमेश्वरोऽपि रुष्ट इव प्रतीयते (32), पातयत्यात्मनो मस्तकं श्रीमतां चरणसरारुहेषु (32), श्रेणी सुधारयितुम् (71, 72), हस्तोपरि हस्तं धृत्वा (72), आनीतवान् आसम् (72) ।

That apart, the *Patra-sāhityam* is a welcome addition to the growing literature on letter-writing.

PRABANDHĀMṚTAM

The *Prabandhāmṛtam* (PA)[17] is a collection of Pt. Kānkara's twenty seven essays of uneven size. The PA may be divided into two thematically homogeneous segments, consisting of thirteen and fourteen essays respectively. The first segment deals with different aspects of the Sanskrit language, undoubtedly the most ancient and sacred language of the Hindus. In the body of the thirteen essays the author has discussed the origin, greatness and genius of Sanskrit as also its role in bringing about unity and cohesion in the country. In view of its being the repository of ancient wisdom and culture, the importance of its study by all sections of society in the manner of national language, is emphasized and the means to popularize it are vigorously spelt out. The rationale of its being called *Saṁskṛta* and the oft-repeated question whether Sanskrit was ever the spoken language of the country, are also subjected to a substantial discussion. In investigating into these issues, the author does not seem to break fresh ground and more often than not is content to restate the earlier views. He holds the rather queer view that the Sanskrit language got this appellation as a result of sustained refining of the loose language of the Vedas. The two essays in the segment that are marked by freshness and effective '*Saṁskṛtasāhityam Hindīkavayaśca*' and '*Saṁskṛtasāhitye Hāsyarasaḥ*'. It is instructive to find how even the noted Hindi poets had drawn upon or borrowed from Sanskrit poems and plays to lend charm to their writings. The author does not take kindly to these depredations of the Hindi poets, though he stops short of branding them as plagiarists. It is however, the essay '*Saṁskṛtasāhitye Hāsyarasaḥ*' that holds the pride of place in the section. The way the author has analysed and illustrated the sentiment with examples drawn from a variety of sources, imparts a new dimension to the study.

Section two virtually represents an opposite pole to the preceding segment. While the first has a faint śāstric ring about it, the second section is basically descriptive in character.

17. Ed. Narayan Shastri Kankar, Vidya Vaibhav Bhavan, Jaipur.

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Five of the writings stem from the author's visits to Kashmir, Varanasi, Uttar Kashi, Delhi and Bombay; three seek to capture the genius of the three main seasons, namely summer, rains and winter. Four of the essays concern themselves with the depiction of scenic or sylvan beauties. The segment ends with a fascinating profile of the author's *guru* Pt. Madhusudan Jha, the mighty Vedist of his days.

The author seems to be in his true colours in the descriptive essays. As a traditional *Paṇḍita*, he has sought to describe the genius of the various places and natural beauties in the ornate prose, marked by the gimmicks that had settled as its inseparable concomitants. Be it the Shalimar Garden or snow-fall or the rigours of summer or gorgeous beauties of nature, all that has come to vibrate with life at the touch of his pen. And in order to impart his descriptions a classical aura, he, not unoften, loves to press into service the figures of speech like *Ślesa, Virodhā-bhāsa, Parisaṁkhyā, Utprekṣā* besides the ubiquitous *Upamā* and *Anuprāsa*, and to administer to them liberal doses of recondite grammatical forms. When employed judiciously, they serve to enliven the description. The descriptions of snow-fall[18], summer and the Shalimar Garden are indeed happy. The pen-picture of Pt. Madhusudan Jha[19] emerges as the most attractive piece in the volume.

Besides the trite figures of speech, Pt. Kāṅkara has gleefully used in the PA such complicated grammatical forms, especially the Frequentatives[20], as would despair even a well-equipped grammarian. Quite a number of them are jarring to the extreme. These abstruse forms combine to rob the author's phraseology of directness. At places, his prose seems to lack smoothness as well. And involved expressions are a drag on his otherwise lucid prose.

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18. रात्रौ तत्र परितः संजाते नीहार-पाते कैलासयितं सर्वशैलैः, श्वेतपत्रायितं पादपैः, दधीयितं गङ्गाकूलकर्दमैः, ... शङ्खायितवन्यबिल्वैः, ... शरच्चन्द्रायितं विघर्षणगोलपाषाणैः, ... सुरपतिगजायितं च गण्डशैलखण्डैः । किमन्यत्, तुषारपातेन सम्पूर्ण एव स स्थलाभोगः रजतनगरायते स्म नित्यमेव प्रातः । P. 128.

19. निश्चयेन गुरूणां गुरुरसौ ब्रह्मा इव वेदपारायणपरायणः, विष्णुरिव पद्मासनसुखः, शिव इव सत्यादारनिरतः, सुरगुरुरिव वाचस्पत्यं दधान आसीत् । किमन्यत्, सदाचारप्रवणा अपीमे कृष्णचरितानुरक्ताः, भव्यवैभवविभूषिता अपि संन्यासकृतादराः, समुन्नतात्मानोऽपि विनयाधिष्ठिताश्चासन् । P. 149.

20. तेष्ठीयन्ते (152), निरचेचीयन्त (153), देदेवामास (46), अपजरीहरीति (95), चोचुरीति (95).

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PRABANDHA-MAKARANDAḤ

The *Prabandha-makarandaḥ* (PM)[21] stands on a different footing. Composed of sixty odd essays of moderate size, the tract, in view of the homogeneity of the subjects discussed in the respective groups, may be divided into three well-knit sections. On the face of it, Section one, consisting of twenty two writes-up, commands a sufficiently broad spectrum. It seeks to undertake an appraisal of almost all the major classical poets and prose-writers and some of the issues related to them. The study, however, suffers from a perfunctory approach, and more often then not, the essays included therein lack depth. The pieces on stalwarts like Kālidāsa, Māgha, Bhāravi and Bāṇa are no better than short Notes intended to highlight the core features of their muse. In view of the skeletal character of some of the writings, the term essay applied to them seems to be a misnomer.

The first essay '*Saṁskṛtasāhitye Kāvyaśāstram*' itself is an enigma of sorts. While the title promises the study to deal with the science of poetics (*kāvyaśāstra*), it waxes eloquent on the charms of poetry (*kāvyaśrī*). By itself, the essay claims notice for the winsome prose that the author has worked up to highlight the poetic beauty. The write-up on '*Mahākaviḥ Kumāradāsa*' slips into a general survey of Kumāradāsa's *Jānakīharaṇam*, with silly anecdotes about the poet robbing it much of its sheen and sobriety. But for a few observations on Kumāradāsa's equipment, imagery and language and style, the study fails to undertake a perceptive appraisal of this interesting poem. Strangely enough, the author has given the essay a fair sprinkling of recondite grammatical forms, though they hardly accord with the spirit of the writing.

Besides underscoring Kālidāsa's eminence on other counts in the essay '*Kālidāsasya Vaiśiṣṭyam*' it is author's contention that the *Chāyāvāda* style of Hindi poetry is heavily indebted to the master poet. The essay on *Māgha*, like the writes-up on other poets, is as good as a Note on the great poet, thought it has something to command itself. While the author esteems Māgha's profound learning, he has found fault with his use of *Upamā*, which, in his view, is marked by several anomalies. He also thinks it unfair to credit Māgha with the poetic qualities which are said to be the *forte* of Kālidāsa, Bhāravi and Harṣa.

21. Vidya Vaibhav Bhavan, Jaipur, 1978.

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Section two consists of thirteen essays. Being biographic in character, it turns focus on the life of a number of great personages including political figures like Gandhi, Patel and Nehru, who have been instrumental in shaping the destiny of the country. More than their life sketches, the essays mean to bring into relief their ideals, patriotism and other high values that prompted them to undergo sufferings and make sacrifices for the sake of the country. The essays are evidently intended to inspire the younger generation to imbibe their idealism. The essay '*Bauddha-Dharmastatsāhityañca*' seems to be a misfit in the section. Otherwise also, it is tarnished by a casual treatment of the subject. The write-up on Śrī Kṛṣṇa makes a delightful reading.

Section three is devoted to general subjects including some socio-cultural contemporary issues. Of the twenty five essays, some merit notice. The problem of student-indiscipline that plagues the educational institutions across the country, has been perceptively analysed in the essay '*Vidyārthivargasya anuśāsanaśūnyatā*'. One may not concur with the author on the causes that lead to this malicious malaise, but none would dispute the remedial measures suggested by him. The pernicious practice of dowry that has assumed frightening proportions, has been duly considered in the *Yautakaprathā*. The essay on *Dīpamālikā*, the great festival of lights, makes a happy reading. Contrary to the popular belief, the *Dīpāvalī* is celebrated on the *Kārtika Amāvasyā* because it is the foremost of the four *Mahārātris* and, in the author's view, it is in the fitness of things to greet the auspicious night with strings of lamps and the *Lakṣmī-pūjana*, worship of the goddess of fortune. The essay *Yadi ahaṁ netā bhaveyaṁ* voices the author's determination to root out all evils from the country in case he ever becomes *netā*.

The PM has been written with the limited purpose of ministering to the needs of the examinees. That accounts for the slim size, easy language and direct style of the essays. All this is intended to facilitate quick comprehension of the contents by the student-community. There is no room for complicated grammatical forms in such a writing, yet one occasionally encounters forms like *Bābhajīti* (P. 12), *Cecintatu* (P. 13), *Peprayīti* (P. 15), *niścecimaḥ* (P. 16), *prāsesrīyiṣṭa* (P. 114), *jihriyati* (P. 145).

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Like Pt. Kāñkara's other writings, the PM is also tarnished by some quaint expressions. Phrases like स्वःसौख्यलाभोऽलाभि (P. 14), माधुर्यप्रसादयोः प्रासादे रसपरिपाकस्य हृदयावर्जकं नृत्यमकरायत् (P. 16), नाट्यविद्या शिक्षयितुं रक्षितं (P. 35), नार्यो नराणामिव ... बहुमानं लभन्ते स्म (P. 50), साधारणा वार्ता जाता (P. 145), कन्यानां जन्मना लोकाः शिरः स्फोटयन्ति (P. 177), विषयेऽस्मिन् कृते व्यायामे (P. 178), run counter to the genius of Sanskrit.

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वर्ष : ८६, अङ्क : १–४, जुलाई २००९–अेप्रिल २०१०

गोखले शोभना : मानसोल्लासातील अन्नभोग

धोपाटे श. गो. : महाराष्ट्रात मिळालेला विजयनगर साम्राज्याचा पहिला मराठी शिलालेख

बापट श्रीनन्द लक्ष्मण : रायगडावरील जगदीश्वराच्या अभिलेखाचे पुनर्वाचन

शोध–प्रभा, श्रीलालबहादुरशास्त्रीराष्ट्रियसंस्कृतविद्यापीठम्, नवदेहली – ११० ०१६.
वर्ष : ३४, अङ्क : ४, अक्टूबर, २००९

झा सुन्दरनारायण : दुहिताऽपि दायाद्यमर्हति

ऊदलकुमार : स्फोटवादः

पाठकः ज्ञानधर : महाकविमाघस्य पर्यावरणदृष्टिः

वर्ष : ३५, अङ्क : १, जनवरी २०१०

शर्मा रमेशचन्द्रदाश : वैदिकमन्त्राणामृषयो देवताश्च

द्विवेदी श्रेयांश : भाषातत्त्वम्

भारतभूषणः के. : संस्कृतव्याकरणशिक्षणे नूतनाविष्करणानि

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वर्ष : ३५, अङ्क : २, अप्रैल २०१०

द्विवेदी सरस्वतीप्रसाद : वेदेषु सरस्वती नदी

उपाध्यायः रामराज : पञ्चमहायज्ञीय - विज्ञानम्

मिश्र राजेन्द्र 'अभिराज' : दयानन्दचरित महाकाव्य : कुछ प्रमुख वैशिष्ट्य

शर्मा महेश दत्त : संस्कृतसाहित्य में तारकब्रह्म

शोध-साधना, श्री नटनागर शोध संस्थान, सीतामऊ (मालवा).

वर्ष : २५, अङ्क : २१, २०१०

Gupta Varsha : History of Bhil Tribe in Rajasthan & Gujarat

मिश्र मोहनानंद : संतालो का इतिहास

मिश्र एम. डी. : जयाजी विजय में ग्वालियर की 1857 की क्रान्ति की दुर्लभ सामग्री

संगीत, संगीत - कला का प्रतिनिधि मासिक, संगीत कार्यालय, हाथरस - २०४ १०१ (उ.प्र.)

वर्ष : ७६, अङ्क : १, जनवरी २०१०

अमृत महोत्सव अंक

सन् १९३६ से २००९ तक प्रकाशित 'संगीत' के विशेषांकों की विषय-सूची

काका हाथरसी : मेरा जीवन ए-वन

वर्ष : ७६, अङ्क : २, फरवरी, २०१०

पाठक निशा : आधुनिक काल में शास्त्रीय संगीत के स्तर एवं लोकप्रियता-वृद्धि में सहायक तत्त्वों का मूल्यांकन

शांडिल आर. एस. : हिमाचल प्रदेश की प्रचलित लोक-तालें

बठला क्यूटी : भारतीय संगीत की दार्शनिक आधारशीला : एक अध्ययन

वर्ष : ७६, अङ्क : ३, मार्च, २०१०

शर्मा प्रतीक : शास्त्रीय संगीत, शिक्षा एवं उसके गायकों का विकास

सक्सेना गुलशन : शास्त्रीय संगीत के संरक्षण में संचार-माध्यमों की भूमिका

शर्मा सुभाषिनी : शास्त्रीय संगीत के पारम्परिक घराने : एक विवेचन

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वर्ष : ७६, अङ्क : ५, मई, २०१०

जाम अफ़रोज़ा : कश्मीर के लोकगीतों का विवेचनात्मक अध्ययन

देव नम्रता : प्राचीन जाति-गायन व आधुनिक राग-गायन की परस्पर एकरूपता : एक अध्ययन

पटवर्धन सुधा : गानकोकिला हीराबाई बड़ोदेकर

वर्ष : ७६, अङ्क : ६, जून २०१०

कुदऊँसिंह अंक

मिश्र महेशकुमार 'मधुकर' : लेखक का जीवन परिचय

वर्ष : ७६, अङ्क : ७, जुलाई, २०१०

दास रामकृष्ण : चुनौती-भरी राग-चर्चा

पाठक निशा : संस्कृति का वैश्वीकरण-संगीत के परिप्रेक्ष्य में

सक्सेना राकेशबाला : भक्ति-संगीत

स्वामी वाहिद काज़मी : महाकवि सूरदास से अधिक संगीत-मर्मज्ञ गोविन्द स्वामी

पटवर्धन सुधा : आपके अपने स्वर

सागरिका, संस्कृते त्रैमासिकी शोधपत्रिका, सागरिकासमितिः, संस्कृतविभागः, डॉ. हरीसिंह - गौरविश्वविद्यालयः, सागरम् ।

वर्ष : ४१, अङ्क : १-२, डीसे. २००९-मार्च २०१०

गुप्ता पूनम : आधुनिक-चिकित्सा-क्षेत्रे ॐकारस्य महत्त्वम्

द्विवेदी मीरा : श्रीमद्भगवद्गीताया यज्ञविवेचनम्

मिश्रो विन्ध्येश्वरीप्रसाद : वाक्यपदीयोक्तं - व्याकरणदर्शने मोक्षस्वरूपविमर्शः

गर्गः दिनेशकुमार : श्रीमद्भागवते राजधर्मः

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સ્વાધ્યાય, સ્વાધ્યાય અને સંશોધનનું ત્રૈમાસિક, પ્રાચ્યવિદ્યામંદિર, મહારાજા સયાજીરાવ વિશ્વવિદ્યાલય, વડોદરા.
પુસ્તક : ૪૬, અંક : ૧-૪, વિ. સં. ૨૦૬૫

જોષી પ્રજ્ઞા જોગેશ : શિક્ષાવેદાંગમાં ઉચ્ચારણ વિષયક સંકલ્પના

મોલિયા મનસુખ કે. : ભાગવતપુરાણના ગોપીગીતના છન્દની વિચારણા

પંડ્યા નેહલ : 'સિદ્ધહેમશબ્દાનુશાસન'નું સામાજિક-સાંસ્કૃતિક વિશ્લેષણ

કડીઆ રસીલા : વડોદરાના બે જૂના દસ્તાવેજો

જાની બળવંત : અપભ્રંશ, પ્રાકૃત અને સંસ્કૃત ભાષા-સાહિત્યક્ષેત્રે ડૉ. ભાયાણીનું પ્રદાન

જોષી મિલિન્દ એસ. : કવિ 'રસરાજ' વિરચિત ''સ્વર્ગાયિતા સ્વિસધારા'' શતકકાવ્ય : એક અભ્યાસ

સિંધા કમલજીતસિંહ : સ્ત્રીહૃદયને ઉજાગર કરતી કથાઓ ''છિન્નચ્છાયા'' : એક સમીક્ષા

નાણાવટી રાજેન્દ્ર : શ્રીપતિભટ્ટ વિરચિત 'હિમ્મતપ્રકાશ' આયુર્વેદનો નિદાનગ્રંથ : એક પરિચય

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REVIEW

The Laghusiddhāntakaumudī of Varadarāja, A Primer of Pāṇini's Grammar, Volume I, Trans. & Elucidated with an introduction, by Kanshi Ram, Edited by Mithilesh Chaturvedi, Pub. Motilal Banarsidass Publishers Private Limited, Delhi, First Edition 2010, pp. xxii, 622, Price Rs. 1495/-

The book under review is the first of a three-volume project on the *Laghukaumudī* in English by Kanshi Ram. The remaining two volumes are under process. It is perhaps the best work in English that has been produced so far. Among all the works done on *Laghukaumudī* in Hindi, the *Bhaimī-vyākhyā* is excellent as it provides a detailed, lucid and analytical exposition of the subject matter. However, in English, for the first time, James R. Ballantyne simply translated the text in 1849. Afterwards, in 1928, V.V. Mirashi planned to present the English translation of *Laghukaumudī* with notes in two parts but he could only publish the first part which comprises *saṁjñā, sandhi, kṛt* affixes, meanings of case-endings and compounds (p. xviii). Obviously, there was a pressing need for a more comprehensive commentary, on the text under review, in English, which the present work has fulfilled.

The *Laghukaumudī* is the most popular Sanskrit grammatical treatise for those who want to gain an access to the grammar of Pāṇini. Varadarāja (probably 17th century) who has selected 1270 *sūtras* of Pāṇini and commented on them in a manner that is easy of comprehension to a beginner. The present work includes the text (*sūtras* and *vṛtti*) together with an English translation and a detailed elucidation with adequate references and illustrations. The *Siddhāntakaumudī* by Bhaṭṭojidīkṣita and *Laghukaumudī* by Varadarājācārya, are the most popular among them. These are prescribed even today as a part of the curriculum in most of the Universities. The *Laghukaumudī* by Varadarājācārya aims to help those who want to be initiated into the study of Pāṇini's grammar (*Pāṇinīya-praveśāya*). This objective is fulfilled when *Laghukaumudī* is studied with fully referenced aphorisms.

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It is my great privilege to avail the opportunity to review this book by my revered teacher Kanshi Ram. At present, very few teachers of Sanskrit grammar can expound the subject matter of traditional Sanskrit grammar with a modern approach. He is one of them. He has a long experience of 36 years of teaching Sanskrit Grammar and Indian Philosophy, especially Vedānta and Nyāya, at Hans Raj College, Delhi University, before his retirement in 2007. After his retirement, he is engaged in various projects, the present volume is one of them just after *Tarkasaṅgraha* in 2010.

At the beginning, the text is equipped with 'A Note on Transliteration (p. viii)' used in this volume followed by Acknowledgements (pp. ix-x). Thereafter, there is an informative introduction (pp. xi-xx) by the Translator & elucidator himself, which provides a general discussion about the aim and objective of the *Kaumudī* type texts including the text under review and its author Varadarāja. It also presents the format of the present volume. After this, Abbreviations (pp. xxi, xxii) used in the present work are listed.

In this volume, the first four *prakaraṇa*s of *Laghusiddhāntakaumudī* have been expounded in a detailed and lucid manner. These are : *saṁjñā-prakaraṇa*, *sandhi-prakaraṇa*, *subanta-prakaraṇa* and *avyaya-prakaraṇa*.

The first chapter (pp. 1, 22), *saṁjñā-prakaraṇa* (Technical Terms), consists of fourteen *sūtra*s (1-14). In expounding the concept of articulation, on the *sūtra*, *tulyāsyaprayatnaṁ savarṇam* (Pāṇini - 1.1.39), different parameters and features have been discussed in detail, and the same have been displayed in three tables: i. the places of articulation, ii. internal efforts and iii. external efforts.

The second chapter (pp. 23, 140) is *Sandhi-prakaraṇa* that deals with major *sandhi*-rules on i. *ac-sandhi* (pp. 23, 78) ii. *hal-sandhi* (pp. 79, 124), and iii. *visarga-sandhi*(125,140). However, the ending line of this chapter indicates that the present chapter contains five *sandhi*s- *iti pañcasandhi-prakaraṇam*, which means the chapter on five *sandhi* ends here (p. 140). This confusion has been removed in the footnote on the same page (p. 140).

The third chapter, *Subanta-prakaraṇa* (pp.141, 551), discusses the declension and formation of *subanta-pada*s in six parts. i. *ajanta-puṁliṅga* (pp. 141, 278) - masculine words ending with '*ac*'. ii. *ajanta-strīliṅga* (pp. 279, 315) - feminine words ending with '*ac*'. iii. *ajanta-napuṁsakaliṅga* (316, 346) - neuter words ending with '*ac*'. iv. *halanta-puliṅga* (pp. 347, 502) - masculine words ending with '*hal*'. v. *halanta- strīliṅga* (pp. 503, 523) - feminine words ending with '*hal*'. vi. *halanta- napuṁsakaliṅga*(524, 551) - neuter

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words ending with '*hal*'. It covers, 410 pages, the lengthiest portion of the present volume. According to *Pāṇinīya* grammar *Pada*s are of twofold nature, i. *Subanta* (Declension), an inflected nominal base, and ii. '*Tiṅanta*'- an inflected verbal base (*suptiṅantaṁ padam* 1.4.14). The present volume deals with only the former one. At the outset, the meaning of the term *prātipadikam*, as discussed in *sūtra*s (115, 116) and *vṛtti*s thereon, have been expounded point-wise in the light of *Pāṇinīya* rules and meta-rules in quite a systematic manner with examples and necessary references. In fact, the elucidator has taken much pains in explaining the technical terms and does not forget to quote *Pāṇinīyasūtra*s or *vārttika*s and the *Mahābhāṣya* whenever needed for clarification.

The last chapter, "*avyaya-prakaraṇam*" (pp.552, 583), elucidating six *sūtra*s (366-371), deals with indeclinables (*avyaya*). The chapter begins with a general discussion of the nature and category of the indeclinables of Sanskrit grammar. These are called indeclinable because they remain uninflected. However, it is not necessary that all the *avyaya*s do not undergo any transformation (pp.553, 554). The indeclinables include a number of adverbs, conjunctions and interjections. The present edition provides ample examples of indeclinables, which have been classified into four categories : i. *svarādinipāta* (Pāṇini, 1.1.37) with two sub-divisions (a) *svarādi* and (b) *cādi*. ii. *taddhita-avyaya*, (Pāṇini, 1.1.38) - It means a derivative, which ends in a *taddhita* affix and does not take all the *sup*-endings (p.577). iii. *kṛdavyaya* (Pāṇini, 1.1.39) - this section deals with indeclinables formed with *kṛt*-affixes (p.578). iv. *avyayayībhāva* (Pāṇini, 1.1.40). Besides these, the view of ancient grammarian Bhāguri has been critically examined, taking into consideration the view of Nāgeśa. All the words formed with *taddhita* and *kṛt* affixes and *avyayayībhāva* compound are regarded as *avyayas* in specific grammatical conditions (*Sūtra*s, 367, 368 & 370).

At the end, the present volume contains an authentic and rich Bibliography (pp.586, 588) of primary and secondary sources. The first two pages (pp.585, 586) display the list of 'Texts'. Thereafter, a list of secondary sources is given under the subhead "Translations & Studies" (pp.587, 588). There is also a "Complete list of the *sūtra*s of the *Laghusiddhāntakaumudī*" (pp.589, 608). Further, at the end, there are four indexes, which enhance the quality of the present work: i. Index of the *sūtra*s of the *Laghusiddhāntakaumudī*, Vol.I (pp.609, 613), ii. The Index of the *vārttika*s and *paribhāṣā*s (pp.614, 615), iii. Index of Declined Words (pp.616, 618) and iv. Index of Indeclinables (pp. 619, 622).

The present work is of the highest professional quality. The method of presentation of whole subject matter is as lucid as it enables its reader to understand grammatical principles easily. The parenthetical and technical Sanskrit terms etc. are italicized properly. Overall,

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the size and shape of fonts used for *Devanāgarī* and Roman scripts are in a proper way. The elucidator has taken due care to introduce the reader to the grammatical devices of Pāṇini's *Aṣṭādhyāyī*, like *jñāpana*, *anuvṛtti*, *nirdeśa* etc. whenever required (p. xx).

By all accounts, the work is an eternal contribution. While going through the 622 pages of the book, one can appreciate the strenuous effort and great talent of Kanshi Ram. The incisiveness and depth of the analytical exposition becomes amply clear when we come across such places where, for example, he criticizes the view of Bhimasena Shastri on the *sūtra vāvasāne* {(145) p. 175} and even this approves Varadarāja's interpretation of *śeṣe lopaḥ* {(312) p. 431}. Therefore, he deserves our praise and great regards for this valuable contribution. In short, he has fulfilled a long pending demand of the students of *Laghukaumudī* which is certainly very useful especially for those who know English and want to have a grasp of Sanskrit grammar. We are eagerly waiting for the remaining two volumes.

There is hardly any error of editing or proof-reading in this edition. Both *Devanāgarī* and Roman scripts are almost faultless. Therefore, for this onerous job, the entire team of the project deserves our compliments. The editor, Mithilesh Chaturvedi, deserves special thanks for editing the work quite earnestly and meticulously. The only thing that appears wanting is an editorial by the editor.

The printing, binding, quality of paper used for the publication and the attractive get-up of the book are excellent. Therefore, the publisher also deserves many thanks of all the students of Sanskrit language for presenting this valuable book to them. We recommend this work to all serious readers, students and teachers; to those who have an interest in the study of traditional Sanskrit grammar.

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Ramanath Pandey

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M. S. University Oriental Series No. 25

VEDIC ENTITIES AND IDENTITIES

(Ethno-Archaeology of the Vedic-Period)

By

PRAMOD V. PATHAK

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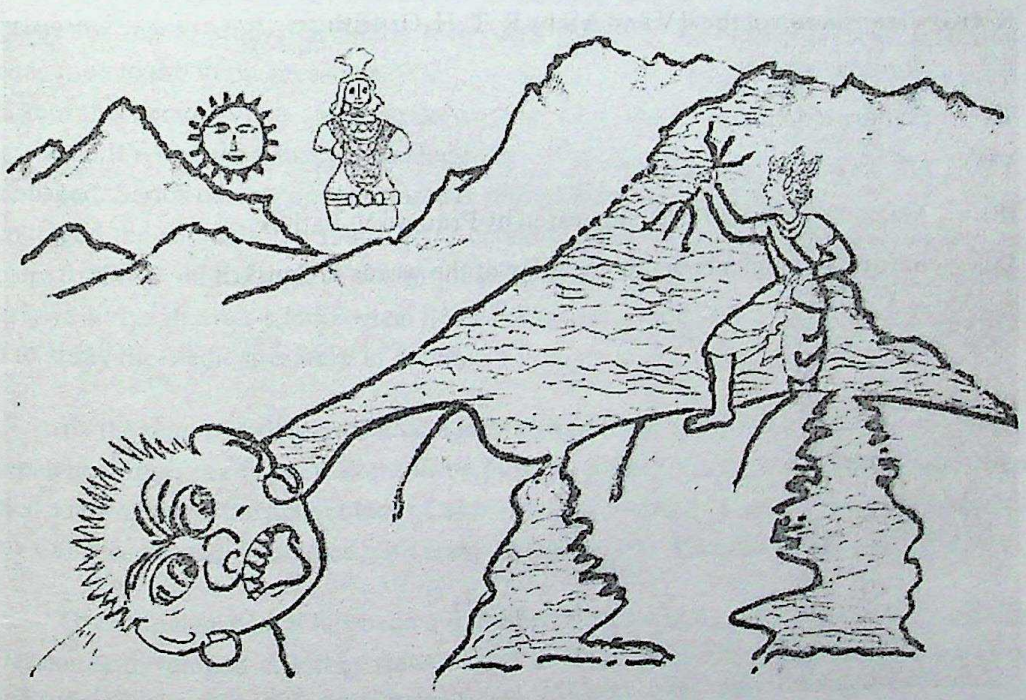
M. S. University Oriental Series No. 25

VEDIC ENTITIES AND IDENTITIES

PRAMOD V. PATHAK*



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ABBREVIATIONS USED IN THE TEXT

AV - *Atharvaveda*

HDV – Translation of the Rigvedic hymns by H. D. Velankar

HHW – Translation of the *Ṛgveda* by H. H. Wilson

KFG - Translation of the *Ṛgveda* in German by K.F. Geldner

KSS – *Kātyāyana Śrauta Sūtra*

nig - *Nighaṇṭu*

nir - *Nirukta* by Yāskācārya

RTHG – Translation of the RV and AV by R. T. H. Griffith

RV - *Ṛgveda*

TS - *Taittirīya Saṁhitā*

YV - *Yajurveda*

(P) - Meaning of the words as suggested by Pramod V. Pathak

(S) - Sāyaṇa's comments on the meaning of the words in Sanskrit

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PREFACE

Since my childhood, I developed liking for the historical and ancient text reading. Series of articles by Adv. P.R. Deshmukh on the Indus Culture and the *Ṛgveda* and a series of lectures by Iravatham Mahadevan during college days gave me an idea that Indus seals posed a great problem for scholars all over the world.

After marriage, my wife Usha joined M.A. Sanskrit course. We both studied a few hymns of the RV as a part of her studies. Next I got golden opportunity to study the *Nāsadīya Sūkta* at the feet of great savant and scholar Tarkasurya Sitaramshastri Kurundkar. He opened the way for me to study the Vedic texts with Sāyaṇa's commentary. It was my formal introduction to the Vedic literature. While studying the Viśvāmitra-Nadī hymn, I hit upon the idea that the demon Vṛtra could be an earthen bund formed due to tectonic upheavals. I studied the RV text thoroughly and found that it was the way the Vṛtra's identity could be established. Series of my papers in Annals of Bandarkar Oriental Research Institute further encouraged me to study the Indra-Vṛtra conflict in depth. As somebody suggested me to register for Ph.D. on the topic, I was fortunate enough that Prof. S. A. Upadhyay, Director of Bharatiya Vidya Bhavan's Indological Research Institute accepted me as his Ph.D. student. I had to study the Vedic literature in depth.

By the time I finished my Ph.D., I had few problems to be further investigated. I found Paśupati seal from the Indus Culture to be pictorial representation of hymn AV 2.34. Then started a new quest in the field of Indus Culture. I started visiting Deccan College, visited a few Indus Culture sites and interacted with many archaeologists. They encouraged me a lot.

Over the decades, it has been a multidisciplinary quest. As a Chemical engineer by profession, I developed different view to look at these things. The last thing I did was to actually fabricate a porous pot, similar to the pots from the Indus Culture and conduct experiments.

At the Oriental Institute, M.S. University, I got this opportunity to present many of my findings before the enlightened audience at Vadodara. The credit goes to Dr. D. V. alias Dadumia Nene and Prof. Mukund Wadekar who have organized it. Thanks are also due to colleagues of Prof. Wadekar at the Oriental Institute, who critically corrected the proofs.

I wish to thank the various publications of books and journals and private individuals whose works I have quoted. Should there be any omissions, I apologize on behalf of publishers and myself and we will be pleased to make appropriate acknowledgements in future.

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For the library and textual support, I relied on the libraries at Bharatiya Vidya Bhavan, Chaupati, Mumbai; Decan College Library, Pune; K. R. Cama Oriental Institute, Mumbai and library at University of Houston, Houston, Texas, USA. Staff at these libraries, was very co-operative. I received Xerox of old map of Seistan, Afghanistan, from the British Museum Library. I thank them all for their co-operation.

My quest for the nature of Vṛtra started with publications in the Annals of Bhandarkar Oriental Research Institute. A series of three papers on the nature of Vṛtra was published in A.B.O.R.I. Pune. Then, the editor Dr. Nawathe gave me break by way of these publications. I am grateful to him. Dr. Madhavi Kolhatkar, my archaeologist friends Dr. P.P. Jogalekar, Dr. Vasant Shinde at Deccan Collge, Dr. Ajit Prasad, Dr. K. Krishnan and Prof. V. H. Sonavane at the M.S. University Vadodara, Prof. V. N. Misra, Ex-Director, Deccan College, and late Dr. S. P. Gupta always encouraged me in my quest for the Vedic and Indus Culture topics. Swati Panashikar from Vasai, drew the cover page picture about my conception of the Vedic Vṛtra. I thank her for patient listening and efforts. My younger brother, Prof. Yashwant Pathak, University of South Florida, USA, has been purchasing books related to my interest. He was solely responsible for the book, *The Afghan Connection*, I wrote in 1999. But for these books, especially related to Vṛtra episode, my researches would not be complete. I acknowledge his help. I am fortunate to have received support from many like-minded people in my quest at every stage and grateful to all of them. It is my great fortune to have life partner like Usha who stood by me and extended full support. Without her support, I would have not done whatever little I could do. My daughters, Ruta and Aditi followed their mother. Thanking them will just be a formality. Now I wait for the comments from the readers.

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1. IDENTITY OF THE VEDIC VṚTRA

Indra, killing fierce demon Vṛtra, is the most important episode in the Vedic literature. The Vedic seers praised and eulogized Indra for killing the demon Vṛtra, who was an archenemy of Indra. According to the *Satapatha Brāhmaṇa*, the basic *yajña* ritual of *Darśapaūrṇamāseṣṭi* was formulated to invigorate Indra to kill Vṛtra. The story of Indra – Vṛtra conflict is most frequently mentioned in the Vedic literature and more so in the *Ṛgveda* text. It acquired great importance so much so that the study of the Vedic literature is considered incomplete unless one has studied the Indra – Vṛtra conflict and is in position to express views on it. As study of Indian philosophy is considered incomplete unless one has studied *Bhagavad Gītā*, similarly it is with the nature of Indra-Vṛtra conflict in case of the Vedic literature. And so, many scholars have expressed their views especially on the identity of Vṛtra since the ancient times. They gave different interpretations of the *Ṛcs* in the RV. text, and their views on the nature of Vṛtra differed considerably. Yāskācārya's *Nirukta*, which dates back to 3000 BPE, enumerates three different views on the nature of Vṛtra.

Western scholars started studying the Vedic literature about two centuries ago. They came out with altogether different interpretations. Later on, the Indian scholars following the footsteps of the Western scholars, too gave their own interpretations.

In the following sections, the author has proposed that Vṛtra was an earthen bund formed due to tectonic upheavals, occurring in the Indian subcontinent and the killing of Vṛtra, was an act of breaching the loosely formed earthen bund.

1 PLATE TECTONICS : THE GLOBAL PHENOMENA

Although appearing rigid and tightly packed, earth's surface has been undergoing changes over the millions of years. In fact, it is fragmented in many sections called "*Plates*". These plates are slowly moving with respect to each other. As these plates move, they push each other or they move away from each other. As a result of this movement, several types of upheavals like earthquakes, volcano eruptions occur on the surface of the earth. To explain these and some other phenomenon, geo-scientist Harry Hess proposed the plate Tectonic model of the earth's surface in 1962 (Hess 1972:23-38). Within a short time, many geological phenomena could be easily explained. Hess's hypothesis of plate Tectonic movement was widely accepted and geological scientists all over the world, conducted surveys and experiments to verify the continental drifts. In due course of time, scientists were able to even verify

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drifting continents and their speeds. It is in the range of only a few cms per year. The plate tectonic theory explained several geological phenomena such as:

1. Drifting of continents,
2. Mid oceanic ridges,
3. Ocean-floor spreading,
4. Geo-magnetic anomalies,
5. Formation of island-arcs in oceans,
6. Earthquake-epicenters,
7. Oceanic sedimentations, etc.

It was found that Indian subcontinent has its own identity as a separate plate since 120 million years, as it separated from the African plate. It has, since then moved northward pushing under the Eurasian plate (Fig 1). As a result of that movement - great mountain ranges of Himalaya and Hindukush, a mid oceanic ridge called Carlberg's ridge in the Arabian Sea, geological fault formation in the Quetta-Chaman area in Baluchistan and Herat region in Afghanistan etc. have come into existence.

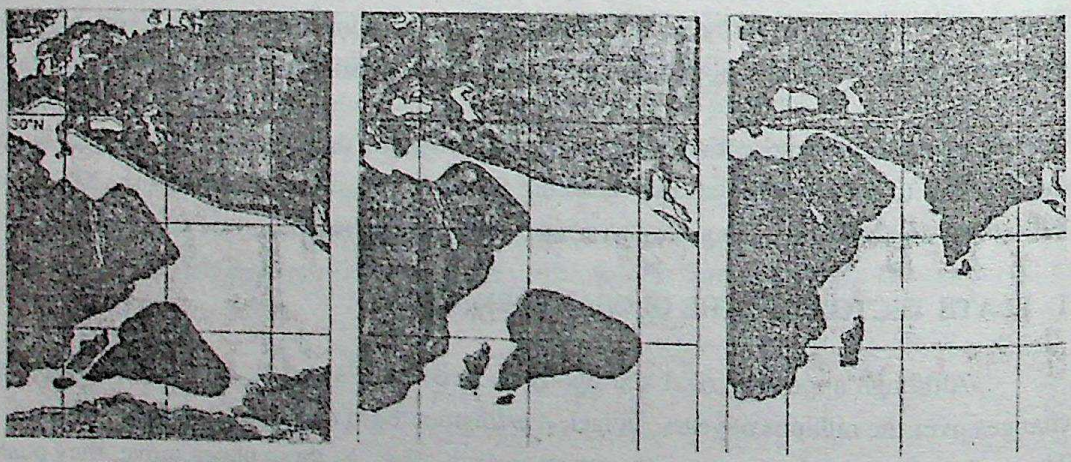

Fig. 1 Drifting of Indian plate since

a) 120 million years, b) 80 million and c) 40 million years

On the occasion of 150th anniversary, the Royal Geographical Society undertook expedition for studying the tectonic movements in the Karakoram mountain ranges under the leadership of Keith Miller. In his account of expedition 'Continents on collision', Miller has dealt in depth the details of the project (Miller: 1982). Some of his findings are summarized below:

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1. The two continental plates, namely the Eurasian plate and the Indian plate, are colliding at the rate of about 15cm (6 inches) per year.
2. Before the collision took place, the Tibetan plateau had maximum altitude of only 1100m (3300 ft) and the climate to match. Animals such as hippo, giraffe, and buffalo, freely roamed in the country. As a result of pushing by the Indian plate, average height of Tibetan plateau is raised to almost 5000m (16400 ft) and the plateau is devoid of any form of species mentioned above.
3. The landforms in the Karakoram region, are developing at a rate faster than anywhere on the earth. Rivers are frequently blocked by the mud fashes or rock falls, sweeping down the hillsides and across the valley floors or by advancing glaciers. Such events cause extensive lakes to form. These can stretch back up the valley from the blockage location for many Kilometers. Hot springs and frequent earthquakes point to the geological instability of the Krakoram region (Pathak 2001:15).

2 TECTONIC SHIFTS IN THE INDIAN SUBCONTINENT

The northward movement of the Indian plate has brought about several upheavals and changes in the Indian subcontinent.

River courses in the Himalayan region come under the influence of the large transform fault originating at the end of the Carlsberg mid-ocean ridge in Arabian Sea. It extends through Quetta-chaman region of Baluchistan to the foothills of Hindukush mountain ranges (Molner and Topponier 1975: 419-426). As a result of the tectonic activity in this region, the river courses in Punjab and the Northwestern region of India i.e. the Indus, Sutlej, Beas etc. have undergone changes and shifts since the pre-historic times.

Indus River Migrations

In the pre-historic times, the city of Mohenjodaro was presumably located on the banks of the river Indus. The current course of the river has shifted from the site of Moherjodaro by about 48 km. Archaeological excavations indicate that the city was abandoned thrice on account of floods and heavy silt deposition (Snelgrove 1979:392-403).

Excellent survey of both historical and literary sources pointing to the shifting courses of the Indus was compiled by Major General M.R.Haig in his book '*The Indus Delta country*'. The Iranian monarch Durius is supposed to have surveyed and plotted the course of the Indus in the 6th century BCE. During the time of Alexander, around 326 BCE, the river bifurcated at Patala, where there were two ports. At the time of Muhammad Bin Kasim in 771 CE, excellent port of Debal was located on a distributory in growing delta. The Indus continued to march westwards. In the 14th century sea retreated from the port of Debal and a better port of Lari Bunder, came in use since 18th century. Several changes in the course of river Indus are well documented (Haig 1884).

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Migration of Rivers Sutlej and Sarasvatī

There are strong indicators that the river Sutlej once flowed into water channel Nara; then shifted westward to merge with the river Indus. It has migrated several times in the western direction. Based on LANDSAT imagery technique, paleo-channels of Sutlej are documented. These indicate the paleo-channels of Sutlej and Yamunā rivers joined the Sarasvatī channel in the pre-historic period (Agrawal and Sood 1982:223-232).

The river Sarasvatī is the most revered river in the Rigvedic lore. It also underwent migrations westwards and finally disappeared in the Rajasthan desert. Paleo-channels of the Sarasvatī river pointing to the westward migration are also documented. In the ancient times, Sarasvatī river used to merge in ocean near Kori creak in the Rann of Kachchna. Researchers attributed these river migrations to the mild tectonic shifts. Lithospheric movements on this tectonically sensitive zone has resulted in climatic changes and aridity (Yahspal et al 1980:317-331)

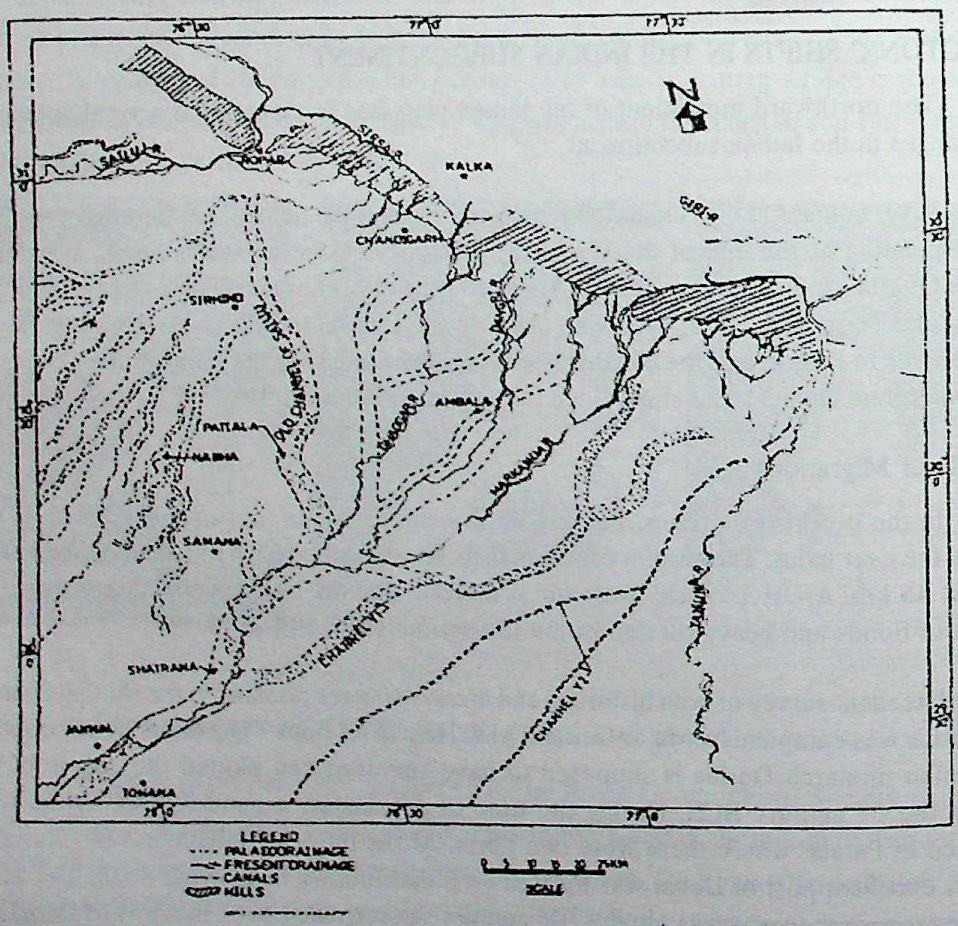

Fig. 2 Paleo-Channels of Sutlej and Yamuna (Reproduced from *The Proceedings of Indian Academy of Sciences (PIAS) (Earth and Planetary Sciences)* Vol. 89, No. 3, Nov 1980 P 321

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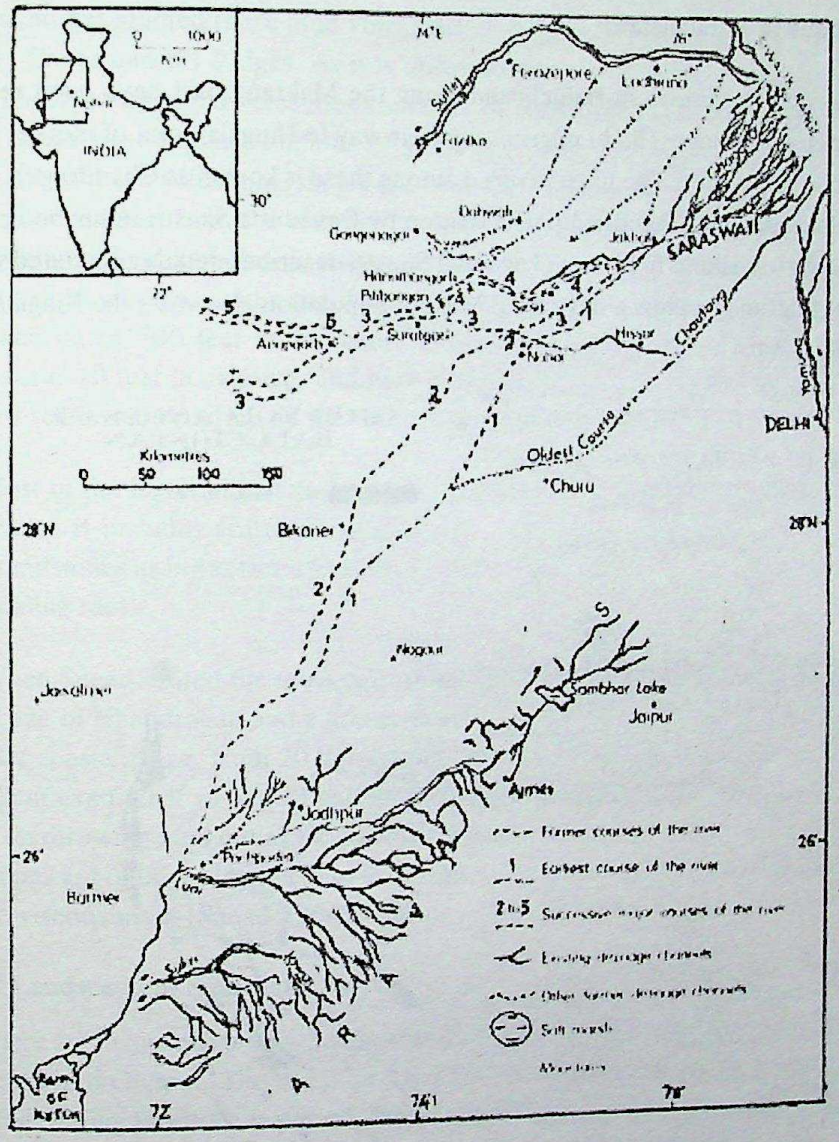

Fig. 3 Shifting Channels of Sarasvatī (Reproduced from *The Geographic Journal* Vol. 145, Part 3, Nov. 1979, P 147)

Some of the paleo channels of Sarasvatī, have been dated with the help of LANDSAT imagery. There are five major courses plotted. Out of these two courses on the eastern side belong to the Pleistocene period extending from 1,000,000 BPE to 10,000 BPE, other three have been dated in the Holocene period i.e. from 10,000 BPE to 3800 BPE. The researchers also point to the major wet phase in the region during that period (Ghosh et al. 1980:8-12).

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Mud Volcanoes in Baluchistan

The mud volcanoes in Baluchistan along the Makran coast have been revered as sacred place of pilgrimage. Hindu pilgrims on their way to Hingalaj, seat of mother goddess, visit these mud volcanoes. The most revered among these is known as Chandragup. Account of travel to Hingalaj and Chandragup was written by Devadutta Shastri in his book '*Āgneya Tīrtha Hiṅgalāja*' in Hindi. In his travel account Shastri describes details associated with both the places of pilgrimage. Now a days local Muslim population also visits the Hingalaj temple calling it *nānikī-haj*.

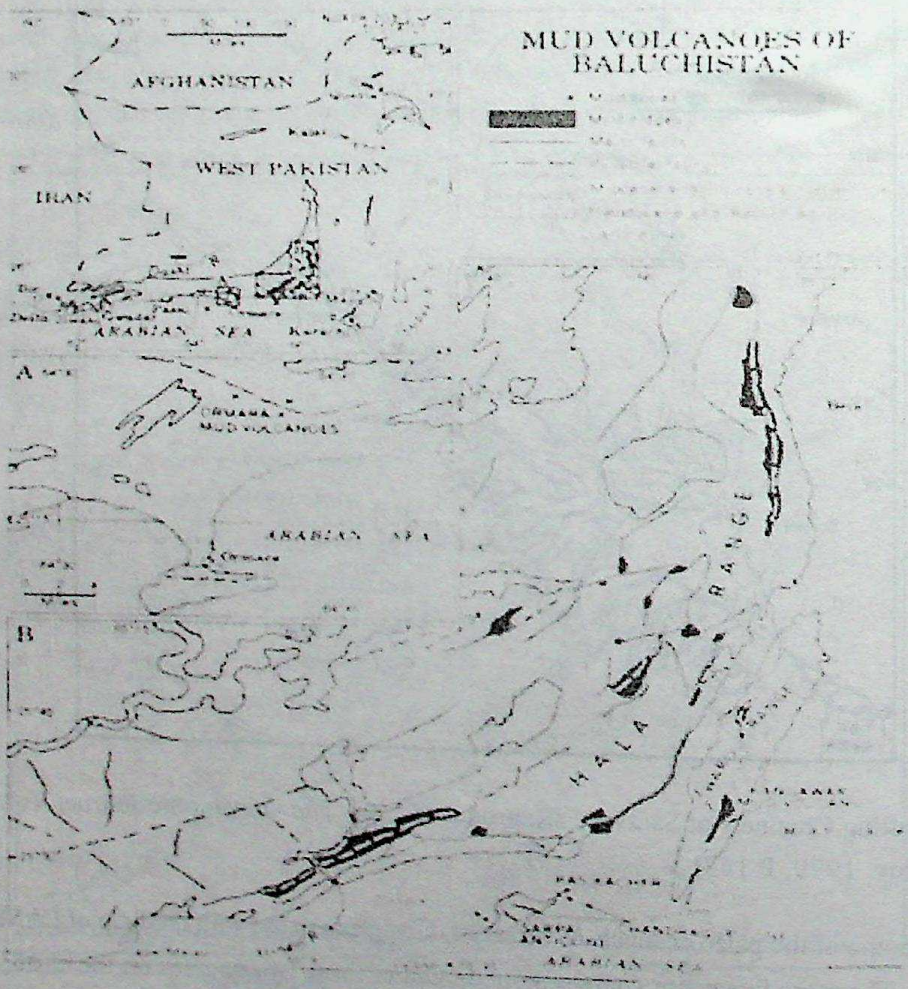

Fig. 4 Location of Mud Volcanoes in Baluchistan
(Reproduced from Snead R. E. (1964)
Geographical Review Vol. 54, P. 547)

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Snead has studied these mud volcanoes in depth and classified these in two types, namely (1) Cones and (2) Ridges. As it is understood now on the background of the plate Tectonic Theory, these mud volcanoes are result of shifting of the Indian plate. These have remained active over the last millions of years upwelling the viscous mud fountains. As Snead describes these volcanoes, six groups of cones rise directly from a nearly level plain. Each cone has resulted from the outpouring of mud from one or more central vents and is analogous to an individual volcanic crater. Upwelling of viscous mud occurs along the fault zone. The largest of these cones rise 300 feet or so above the plain with craters 100 ft. in diameter and bases 700 feet in diameter. The smaller cones are 20-30 feet high, with craters about 6-10 feet in diameter and base diameter of about 140 feet. Most of the cones are close to sea level bordering on the Arabian Sea (Snead 1964: 546-560).

Most of the material that makes up a mud volcano is solidified, silty mud that feels gritty, because it includes scattered sand grains. Other materials include angular chips, blocks of sandstones as big as three feet across and oyster shells. At times the mud resembles the surrounding rocks.

When Snead visited the most celebrated mud volcano of Chandragup, he observed the large cone of Chandragup and a group of mud volcanoes around it. These directly rise from the flat coastal plane, from 20 ft. to about 300 feet. Mud volcano of Chandragup itself is an excellent example if an almost perfectly formed cone that is still active and growing. It still keeps on throwing mud out as the bubbles of gases and steam come out with force. Mud volcano slopes are of the order of 30^0 to 40^0, which appear to be approximately the angles of rest for the viscous mud. (Snead 1964: 549).

Change of Landscape in Saurashtra

There are many indications that Saurashtra Peninsula was probably an island separated from the mainland Gujarat. The sea joined the Gulf of Cambay to Runn of Kachchha. It is proposed that during Pleistocene period, the Cambay-Ahmedabad region was under the sea. Along the Kathiawad coast, the dead coral reefs and raised beaches can be seen few Kms. inland from the present coastline. The tectonic movements brought about these changes. S.R. Rao, who conducted extensive excavation at the Indus culture site at Lothal, concludes that the coast line in this region has been changing since the late Holocene period.

3 CONTEMPORARY TECTONIC ACTIVITY

The instances of tectonic activity cited above belong to the ancient period. The shifting of the Indian plate underneath the Tibetan plateau however is a continuous phenomenon. Its effects are to be seen in the contemporary period also.

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Landslides in the hilly region

It is well known that landslides occur frequently in the Himalayan region. Karakoram Mountain is a hotbed of siesmic activity. Earthquakes too occur frequently in this region. Miller points to the landslides along the Indus river streams. The landslides of widely varying size block the roads, some times once or twice every kilometer. The river Indus carries one of the greatest sediment loads of any river in the world. It is estimated around 5,000,000 MT. per day (Miller 1982: 48).

The landforms in the Karakoram mountain range are developing at a rate faster than any where on the earth. Mud flashes or rock falls sweeping down the hill sides and across the valley floors or by advancing glaciers frequently block rivers in this region. Such events cause extensive lake formations upstream from the location of blockage for many kilometers.

When the hydraulic pressure behind the blockage or a temporary dam gets to a critical level, the river breaches it. A great wave of water travels downstream for many kilometers, fed by empting reservoir of water behind the dam.

Upheaval at Sarat in 1857

Miller has mentioned upheaval of the types mentioned above occurring at Sarat on the Hunza River. There is a gorge at Sarat. It was here, in 1857 that a great slab of rock and glacial debris collapsed into the Hunza river, over the next few months water level rose behind the dam. In due course it disintegrated, and a surge of water sped down the Hunza, Gilgit and Indus rivers. Latter rose by 17 mt. (55 ft.) within the span of few hours, before loosing mass on the plains of Punjab at Attock, some 700 km. away. In the process it drowned an entire Punjabi army (Miller 1982: 99).

Today, the remains of the dam are still to be seen as the river charges through the boulder-strewn ravine in which nobody could survive. The cliffs above the dam site are still rotten and threaten to deposit hundreds of thousands of tons of rock into the ravine and could cause another catastrophe of equal dimensions (Miller 1982:54).

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Mud dam at Shishkat

At Shishkat which lay round the next corner, a mudslide demolished half the village and also blocked the Hunza River. The resulting dam created a lake some 15km. long that drowned both the road and the bridge, the latter now being lost under a few meters of new river bed silt (Miller 1982:55).

Dam on Shimshal River

During the geological survey, Miller and his colleagues faced an impending danger from such a dam on Shimshal river. 'Ironically, however, current circumstances dictated that we could not travel beyond the point where Ghulkin Glacier enters the main Hunza Valley since it had recently obliterated the road. Bob (a colleague of Miller) also reported on two glaciers coming in from opposite sides of Shismal valley, which had cut off the track and dammed the river and were causing great concern because of possibility of a flash flood when the dam broke' (Miller 1982: 39).

The three instances quoted above are of the recent times. These upheavals continue to occur in the hilly tracts of Karakoram region.

Allah bund on the Indus Plains

Lambrick has pointed to a very similar case of a bund formation on the Indus plains, as reported by Alexander Burnes, who visited the site. (Burnes quoted in Lambrick 1979: 313-322). During the earthquake of 1819 CE. a wall of ground was suddenly raised in the path of Hakra water channel in the Rann of Kachchha. Fig. 5 describes the location of the bund. It was about 80 km. long, though not more than 5-6 mt. in height, across the plain in Lower Sind. As Burnes describes it, 'composed of soft clay and covered all over with shells and has quite the appearance of having been broken through by coming torrents'. This suddenly formed bund was called Allah bund. It was breached by a mere flood of spill water coming down the Nara in 1826 CE. It was perhaps first such flood to arrive since the bund was formed (Lambrick 1979: 313-322).

It may be recalled that Allah bund was again in the flashlight and discussed after the recent earthquake in Kachchha in 2001 CE.

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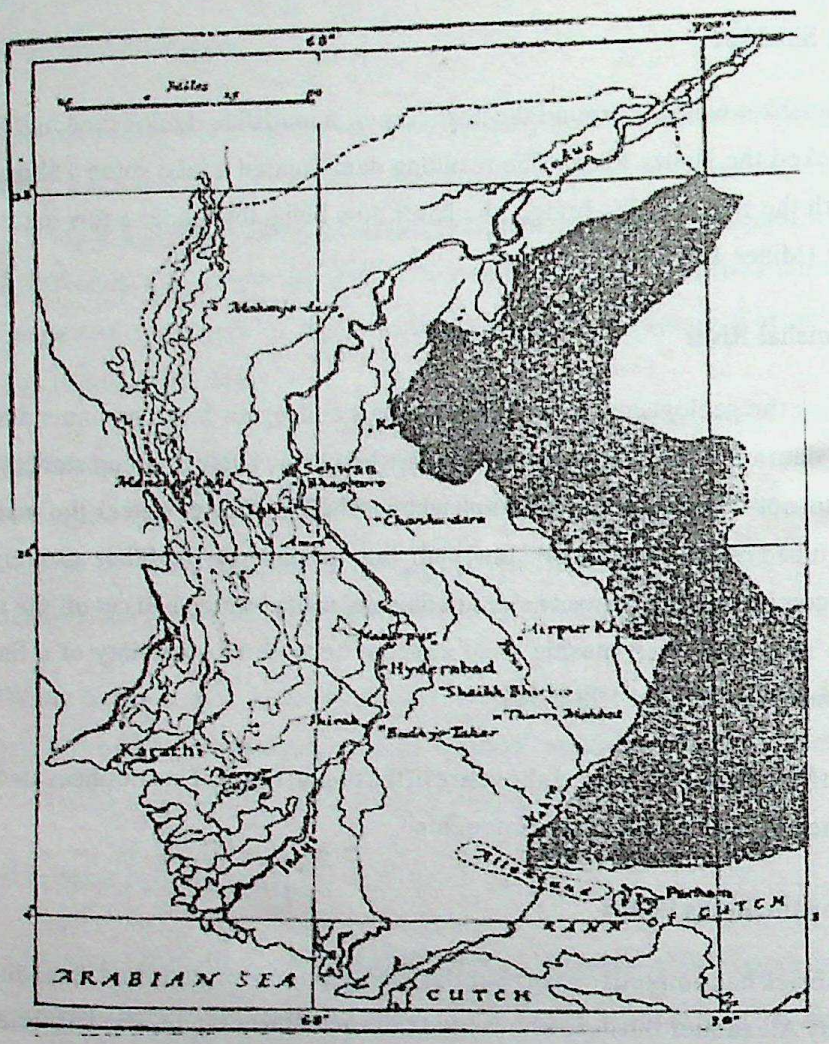

Fig. 5 Location of Allah Bund
(Reproduced from *The Ancient Cities of the Indus* (1979) Ed. G. L. Possehl, P. 314)

Flooding of Mohenjodaro

M.R.Sahani, a paleontologist working in the vicinity of the city of Hyderabad, Sind, noticed silt deposits perched many feet above the level of the Indus plain. Based on this observation and other evidences, he concluded that the ancient flood deposit in the area were not mere overflows of the Indus river but the event occurred on a far larger scale. He proposed that the course of the Indus river must have been blocked time to time causing gradual formation of a huge upstream lake persisting over decades (Sahani 1956:101-107).

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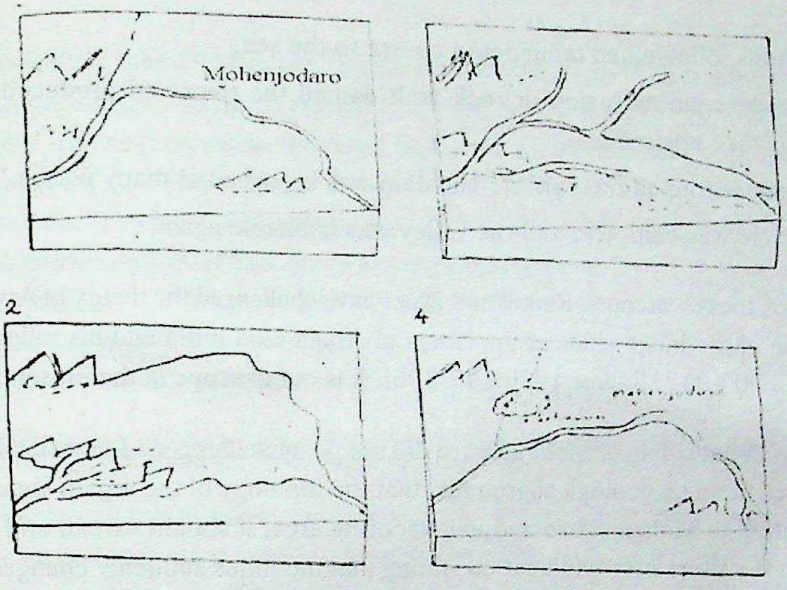

Fig. 6 Successive stages of the Flooding theory
(Reproduced from *The Ancient Cities of the Indus* ed. G. L. Possehl)

Raikes (1979:279-306) and Dales (1979:307-312) undertook excavations at the site of Mohenjodaro and collected detailed data on flooding of the ancient city and silt depositions at the site. Raikes singled out area around the town of Sehwan, some 160km. down stream from Mohenjodaro where the tectonic activity had occurred. To quote Dales, both at Mohenjodaro and at smaller sites between the city and Sehwan the silt deposits are of the kind characteristic of still water conditions in a lake rather than the kind deposited by the fast moving waters of a flooded river. Moreover, there is abundant geological evidence of rock faulting on a large scale near Sehwan. The faulting by itself could have raised a natural dam and turned the upstream position of the Indus into a slow filling lake more probably, however, the same disturbances that caused the faulting were accompanied by massive extrusions of mud, aided by the pressure of accumulated underground gases (Dales 1979: 307-312).

A schematic diagram illustrating the successive stage of the flood theory is given by Dales (Fig.6). He also points to the archeological evidence of the measures taken by the city dwelling population at Mohenjodaro to protect the city. This they did by building massive sun dried brick platforms with fired bricks in the outer most layers. This raised the level of the city above the lake waters. The city was thus flooded no less than five times; the duration of the cycle of lake intrusion and withdrawal may not have lasted for more than 100 years according to Dales (Dales 1979: 311).

The schematic diagram (Fig. 6) gives the following successive stages of flooding of the city.

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1. The Indus followed an unhindered course to the sea,
2. A massive mud extrusion or rock fault damed the river and produced a shallow, marshy lake upstream,
3. Lake water topped the barrier. The dam was breached at many places,
4. The cycle was complete and the valley was habitable again.

Further, the researchers, Raikes and Dales have challenged the theory of Aryan invasion and destruction of the Indus cities at the hands of Aryan God Indra and his followers (Dales 1979:293-296; 307-312, Raikes 1979:297-306). It is out of scope in the present context.

Claims about silting of Mohenjodaro did not go unchallenged. Lambrick (1979:313-322) challenged them on geological grounds, that the topology of the region should not limit the silt deposition to Mohenjodaro and neighbouring area. It should extend still further. He came out with the alternative explanation stating that the Indus suddenly changed its course cutting supply of water to the city. However Lambrick does not explain the multiple silt layers and construction of houses which continued in between the still silt layers.

Wasson (1984: 88-90) challenged the flood theory on the grounds of silt deposition, i.e. sedimentological considerations, grain size and flocculation. Raikes and Dales answered objections raised by both of them and furnished detailed sedimentological data to substantiate their claims.

Present author differs with Dales on the extent of period for breaching of bund extending up to say 100 years. Looking at the soil composition and earthquake leading to the formation of such bund, it would be loosely constituted one and already detached from the ground soil. Such a bund would not withstand hydraulic pressure building over several years. As it happened in the case of Allah bund, which gave in at the very first heavy rainfall, similarly the bund in the ancient times could have been breached very easily thereby discharging accumulated water. This would enable the city population to revert back to the city and start life again. While they restarted, they took extra measures to raise the level of habitation above the flood line as it could be easily marked.

Factual Description by Griswold

H. D. Griswold was an English officer posted in Punjab. He stayed there for almost three decades. He developed keen interest in the Vedic lore and wrote a book, '*The Religion of the Rgveda.*' He took special efforts to correlate the factual environmental data with the *Rgveda* legends. He described the following incident, which he himself witnessed. It has great relevance in the context of Indra-Vṛtra conflicts in the RV. text.

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'About 20th June 1911 in the Tsunth Kul, Shrinagar, a terrific storm of thunder and lightening came at night. No much rainfall at Shrinagar, but a good deal must have fallen on the mountains. The next morning, the water had risen to such a level that we were compelled to move our boats to another place. It was a warm rain, which melted much snow. The evening of the thunderstorm was marked by a marvelous display of lightening. On the far off horizon, the lightening would dart down apparently from heaven to earth. The phenomenon might very well have been interpreted by primitive man as a sky-deity smitting with his weapon some atmospheric or earth demon reclining on the mountains. It may be that the Indra-Vṛtra myth was extended by analogy to cover such cases as this' (Griswold 1972).

4 TECTONIC UPHEAVALS AND INDRA SLAYING SERPENT DEMON VṚTRA

As seen above, the entire region staring from the sea coast in Sind-Baluchistan to the Himalayan-Karakoram ranges comes under the influence of tectonic activity of the Indian plate. Part of Rajastan and Kachchha in Gujarat are also affected by the tectonic activity. It is confirmed by the geological changes that have occurred in this region over several millennia till today. Some instances like formation of Allah bund and then breaching of the same led to the development of the Indra-Vṛtra myth in the *Ṛgveda* text. Author proposes that description of the Vṛtra killing in the *Ṛgveda* text can be better understood if Vṛtra is considered as a tectonically formed and loosely composed earthen bund above the ground level. It was described as serpent lying on the mountains and on the earth.

The region in the Indus valley delta is a flat terrain; at times the slope is of the order of 1: 10,000 to 1: 7000 ft. Formation of even a small bund would accumulate water streams in the region over very wide expanse and create flood-like situation. The RV. text often describes Vṛtra having stopped the river streams. Or such a bund could be formed in the path of hilly tracts of mountain ranges stopping the river flows.

Slaying of Vṛtra was breaching of the bund at several places either due to torrential rains or due to the hydrostatic pressure building up behind the bund. Many a times it would have been accompanied by storms and lightening as described by Griswold. In due course, Indra, the *Vajra* wielding God of the Vedic pantheon, was attributed the destruction of Ahi-Vṛtra. He was raised to the status of the King of Gods.

It is to be noted that Vṛtra story as developed in the *Ṛgveda* text substantially differs from the stories in later texts of *black Yajurveda* and the Brāhmaṇas. This distinction is dealt separately.

While interpreting the nature of Vṛtra based on the description in the RV text, I was not required to alter the meaning of conventional words as many other researchers and scholars have done. These instances too are pointed out in following text.

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Vṛtra killing scenario

In brief the Vṛtra slaying phenomenon can be understood in the following steps.

a) A bund was formed in the path of rivers as a result of tectonic activity.

b) Water streams in the upstream region were held up and accumulated water stretched up miles backward causing havoc to the human habitation coming under the flooded area. Contemporary people perceived it as a serpent demon stopping the river.

c) In due course the loosely formed bund was breached either due to the hydraulic pressure of water accumulated behind the bund or due to severe rainfall. It carried away the loose soil starting with the top layer.

d) This breaching of bund was attributed to the Vedic God – Indra.

e) With the fast flowing waters, breached parts of the bund widened and all the water drained away as if it passed through the channels.

f) Normalcy is restored in the life of people who saw the limbs of serpent demon lying on the earth as described in the RV. text. They praised Lord Indra for slaying serpent demon Vṛtra.

5 THE INTERPRETATIONS OF THE INDRA-VṚTRA CONFLICT

Multiple Interpretations

The story of Indra killing demon Vṛtra is a dominant theme in the entire Vedic literature. While the descriptions in the RV. text are akin to being factual, the descriptions in the YV. and *Brāhmaṇa* texts are legend like, glorification of Indra and demonisation of Vṛtra. These are more of interpretations of the event having occurred in hoary past of the Rigvedic period. Even in the ancient times, scholars and savants differed on the nature of Vṛtra. By the time Yāskācārya compiled the schools of thoughts prevailing then, around 1000 BCE, there were many schools giving different views on the nature of Vṛtra. In the last two centuries, when the western scholars started the Vedic studies, they came out with entirely different interpretations and views. Taking into consideration the views expressed by the several scholars on the nature of Vṛtra since the ancient times, the present author has classified their approach broadly in seven categories (Pathak 2001: 39-40).

1. Ritualistic interpretations,
2. Mythical and Heroic approach,
3. Racial approach,
4. Celestial or Cosmogonic interpretations,
5. Terrestrial or Naturalistic phenomena,
6. Philological approach,
7. Structural analysis of the Vṛtra stories.

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Traditional Views on the Nature of Vṛtra

It appears that there was substantial time gap between the *Rgveda* and other Vedic literature, namely YV, AV and all other Brāhmaṇa texts. The continuity of understanding was lost. In almost all these later texts, Vṛtra was perceived as a serpent demon, a sort of python. As the Vedic sacrificial system elaborated, different ritualistic acts were explained in the context of Vṛtra 's killing, just as application of special collerium, sprinkling of scared water and many other acts. These do not explain the nature of Vṛtra.

As a matter of fact, killing of Vṛtra had really nothing to do with performance of *yajña*. However these texts give an independent explanation based on conception of Vṛtra as a serpent demon. This part is dealt at length later in the text. I call these as the Ritualistic interpretations.

Then followed the text of *Nighaṇṭu*. It is glossary of synonyms. Names indicating Vṛtra and other entities are clubbed together with names of cloud in *Nighaṇṭu* 1.10. There are thirty words signifying cloud. These include Vṛtra also. These can be classified in five categories as under:

1. Cloud: a) *abhram*, a) *valāhakaḥ*, c) *meghaḥ*, d) *uparaḥ*,
   e) *upalaḥ*, f) *purubhojāḥ*, g) *valiśānaḥ*;
2. Mountain: a) a*driḥ*, b) *aśmā*, c) *parvataḥ*, d) *giriḥ*,
   e) *grāvā*, f) *phaligaḥ*.
3. Serpent or animal: a) *Ahiḥ*, b) *Varāhaḥ*.
4. Indra's enemies: a) *Valaḥ* b) *Śambaraḥ*, c) *Rauhiṇaḥ*,
   d) *Asuraḥ*, e) *Raivataḥ*, f) *Vṛtraḥ*, g) *Vṛṣandhiḥ*.
5. Others-(non-specific): a*) gotraḥ*, b) *aśnaḥ*, c) *vrajaḥ*, d) *caruḥ*,
   b) *camasaḥ*, f) *dṛtiḥ*, g) *odanaḥ*, h) *kośaḥ*.

Above classification is based on meanings given in Sanskrit English Dictionary by V.S. Apte (SED-VSA).

The discontinuity in thought and tradition is very clear at the stage of *Nighaṇṭu*. The credit for compilation of *Nighaṇṭu* is usually given to Yāska. However looking at Yāska's naturalistic and rational approach, I do not agree that he would have clubbed together such widely varying words, at times meaning exactly opposite, in a single class.

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Other important text dealing with the nature of Vṛtra is Yāskācārya's *Nirukta*. As I have dealt elsewhere, Yāskācārya's approach towards nature of the Rigvedic deities is completely naturalistic. Commenting on the nature of most of the Vedic entities, he has explained them as identities in nature and environment. He tried to rationalize while giving the etymological derivations of the Vedic names (Pathak 1996:1-4). He did not mystify these entities. I am of the opinion that Yāska had at his disposal, the text of *Nighaṇṭu*. Without disturbing or rejecting the compiled text, he went ahead with etymological derivations given in *Nirukta*. While giving his own derivations Yāska has also referred to many of his predecessors, with whom he differed. It was Yāska's interpretation and etymology that led me to propose Vṛtra as an earthen bund.

Yāska has not only given the etymological derivations of the words but also commented on numerous RV *Ṛcs*. This work is of great value while studying the *Ṛgveda*. Laxman Sarup translated Yāska's *Nirukta*. The translations of the *Nirukta* passages are from that book (Sarup 1967).

Commenting on the nature of demon Vṛtra, Yāska refers to the views of three different schools of thought prevailing in his times.

'*tatko Vṛtraḥ? megha iti nairuktāḥ / tvāṣtra asura ityaitihāsikāḥ / apām ca jyotiṣaśca miśrībhāvakarmaṇo varṣakarma jāyate / totropamārthena yuddhavarṇā bhavanti / ahivat tu khalu mantravarṇā brāhmaṇavādāśca / vivṛddhyā śarīrasya srotāṁsi nivārayāñcakāra / tasmin hate prasasyandira āpaḥ*' (*Nir.* II.16).

Tr : 'Who is Vṛtra ? A cloud, say the *Nairuktas* (i.e. etymologists), an *asura*: son of *Tvāṣtra*, say the *Aitihāsikas* (i.e. historians). The fall of rain arises from the mingling of waters and light. This is figuratively depicted as a conflict. The (Vedic) hymns and the *Brāhmaṇas* described Vṛtra as a serpent. By the expansion of his body, he blocked up the streams. When he was slain, the waters flowed forth'.

Yāska gives the following derivations for the word Vṛtra from three different verbal roots i.e. a) *vṛ* (to cover), b) *vṛt* (to roll) and c) *vṛdha* (to grow) as under:

'*tadvṛtro vṛṇotervā vartatervā vardhatervā / yadāvṛṇottadvṛtrasya vṛtratvam iti vijñāyate / yadavartata tadvṛtrasya vṛtratvam iti vijñāyate / yadavardhata tadvṛtrasya vṛtratvam iti vijñāyate //*'

(*Nir.* II.17)

Tr: 'Vṛtra covers or rolls or grows. Since he covered up (the world), hence the Vritrahood of Vṛtra. Thus it is known. Because he rolled, hence the Vritrahood of Vṛtra.

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Thus it is known. Because he grew (in waters), hence the Vitrahood of Vṛtra. Thus it is known.'

It is fully naturalistic interpretation without any mysticification involved. That is why we have to admire at the genius of Yāskācārya.

After enumerating the different prevailing views, Yāska favours the explanation of Vṛtra to be a cloud. It is apparent from his equation of Vṛtra *hananam* as *meghahanam* in *Nir.* VII.23.

Views of Sāyaṇācārya:

Sāyaṇācārya's commentaries on the Vedic literature are equivalent to a Vedic encyclopedia. No student of the Vedic literature can bypass Sāyaṇa's commentaries. His commentary on the *Ṛgveda* is truly prolific and extensive, giving meaning of every word in the text.

By the time of Sāyaṇa, Vṛtra as cloud was the only explanation accepted among the Vedic scholars. Sāyaṇa too sticks to the same views, at times compromising the meaning of words. While commenting on RV. 2.11.9, 2.14.2, 3.33.8 etc., he comments on 'Vṛtra' to be a cloud for he covers the sky: '*vṛṇotyākāśamiti vṛtro meghaḥ*'.

While commenting on RV. 1.85.9. Vṛtra is enveloper of rain water: *vṛṣṭyudakasyāvarakam*. In other passage explaining the epithet *Vṛtrahan* of Indra (RV. 1.59.6) Sāyaṇa states '*vṛtrahanam Āvarakasya meghasya hantāram*' i.e. 'killer of the (water) obstructing cloud'.

When the term occurs in plural form, i. e. *Vṛtrāṇi* is used (RV. 8.15.3) it is still the enveloping enemies. '*āvarakāṇi śatrujātāni*'.

Even while referring Vṛtra as an *asura*, Ṣāyaṇa sticks to the views of him being a cloud: '*Vṛtramasuraṁ yadvodakasya dātāram megham vā*' (RV. 8.2.32 and 8.3.19).

From the above quotations and many others, we can conclude that Sāyaṇa was firmly of the opinion that Vṛtra was a water enveloping cloud and he had no doubts about it.

However it is to be noted that nowhere in the RV text, killing of Vṛtra is associated with rains, neither God Indra is called as the Rain God. Both, the Western and the Indian scholars of the RV. attest this fact.

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Views of the Modern Scholars on Vṛtra

About two centuries ago the Western scholars started studying the RV. text. They were not influenced by the Indian traditions and held independent, non-religious, unritualistic views on the Vedic lore. When they read about the Indra-Vṛtra conflict, they had some different explanations to offer. Over the last two centuries new information, historical and archeological finding were discovered. It led to altogether different views on the nature of Vṛtra. In due course the Indian scholars following the footsteps of their Western counterparts developed their own views. They too differed with the tradition.

In my earlier book (Pathak 2001), I have extensively dealt with interpretations of as many as thirty-two modern scholars starting with George W. Cox (1870), Max Müller (1897), A. A. Macdonell (1897) till R.N. Dandekar (1955), Ajoy K.Lahiri (1984) and Hale W.E. (1986) (Pathak 2001: 39-106). In all the cases I have pointed out the gaps that exist in their explanations and the descriptions in the RV text.

To point to Max Müller's views, he considers Vṛtra to be an evil spirit. He represents darkness, whether thunderstorm or of night. Vṛtra is overcome by the Gods of light and of morning. Thus the first moment of the morning would be the last moment of Vṛtra. Max Müller equated Indra with the Sun (Max Müller 1897:424). It is far-fetched explanation because-

1. The act of killing Vṛtra it is not as frequent as that of a day and night. It repeated after forty years (RV. 2.12.11), i.e. after a long period according to H.D. Velankar.
2. Why should God who conquers water i.e. Indra be associated with the routine occurrence of day and night?
3. There is separate god Parjanya for rains and Varuṇa who controls the cosmic order. Indra's role is different (Pathak 2001:50).

Naturalistic Interprelations

Vṛtra as entity in nature has been interpreted by Hillebrandt (1891), Lokamanya B.G. Tilak (1956), D.D.Kosambi (1975) and H. D. Griswold (1971). Hillebrandt describes the nature of Vṛtra, 'with this I come back to Vṛtra. The demon who encompasses the rivers, who lies on the streams or mountains, devoid of hands and feet, who encloses waters, covers, shackles and obstructs them, who is pierced in his sleep by Indra with his thunderbolt' was the winter locked water in the Himalaya mountains in the form of glaciers (Hillebrancdt 1981: II: 103-110). Hillebrandt equates Indra with the Sun God, 'only the Sun god, with whose ascending orbit the release and the filling up of the enhanced streams begin, can come into question as opponent of the winter giant, unless one wishes to be content with a vague etymon' (Hillebrandt 1981:II 117).

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Three important considerations prevent identification of Vṛtra with winter demon, in the form of glaciers and Indra with the Sun God.

1. Vṛtra was lying not only on Himalayan Mountains where the snow gathers and glaciers are located, but also on the plains where there is no snow fall.
2. Vṛtra was cut into pieces and lay asunder on the ground so that he could be seen as limbless demon, even after killed by Indra. This would not happen in case of melted snow or a glacier.
3. There already existed the Sun God. In the Rigvedic lore, Indra is a newborn God. The Sun has never been one described in this manner.

Hence, Vṛtra as winter demon and Indra as the Sun God do not satisfactorily explain the Indra-Vṛtra conflict as described in the RV. text.

In this manner I have differed with almost all the scholars with due respect to their great scholarship and devotion to the study of the *Ṛgveda*.

Nature of Vṛtra can be better understood and the relevant *Ṛc*s in the RV. text can be cogently explained without deviating from the conventional meaning of the words, only if *Vṛtra* is considered as a loosely formed earthen bund.

6 INDRA – VṚTRA CONFLICT IN THE *ṚGVEDA*

There are several *Ṛc*s in the RV text, which either give some description of Indra–Vṛtra conflict or just mention it. Starting with the first *maṇḍala* of the RV text till the tenth *maṇḍala*, I have found 93 *Ṛc*s, which mention some aspects of the Indra-Vṛtra conflict or describe some physical aspect of Indra – Vṛtra conflict. The hymn 32 in the first *maṇḍala* i.e. RV 1.32 is completely devoted to the saga of Indra killing the fierce demon Vṛtra. On analyzing the description in the RV. text the following features of the Indra-Vṛtra conflict emerge:

1. Vṛtra in the form of a limbless serpent demon appears on the earth.
2. He holds back the river waters and causes havoc. These are the waters of the terrestrial rivers mostly in Punjab.
3. Indra kills the demon by renting him into pieces.
4. Vṛtra's body cut into pieces lies on the ground.
5. Waters accumulated in the belly of the demon are released and they rush forth to the ocean.
6. People are relieved of the calamity and they praise Lord Indra, who achieves highest place among the pantheon God's on account of this great feat.

*Ṛc*s describing the Indra Vṛtra conflict

In the following pages I have given the original text of the *Ṛc*s; followed by meaning of the words as given by Sāyaṇa and marked as (S) at the end. I have derived the coagent and rational meaning of the same words, which were not properly understood. It is marked by (P) at the end. Then follows the translation of the individual *Ṛc* (Pathak 2001: 107-180).

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List of *Ṛcs* Dealing with the Indra-Vṛtra Conflict

Sr. No.	RV. *maṇḍala*	Hymn – *Ṛc*	Presiding Deity	Seer of the hymn *Ṛc*
1-15	I	32.1 – 15 Complete hymn	Indra	Hiraṇyastūpa Āṅgīrasaḥ
(This *sūkta* will be separately dealt with in the next chapter)				
1	1	33.11	Indra	-do-
2	1	51.4	-do-	Savya Āṅgīrasaḥ
3	1	52.2	-do-	-do-
4	1	54.10	-do-	-do-
5	1	55.6	-do-	-do-
6	1	56.5	-do-	-do-
7	1	56.6	-do-	-do-
8	1	57.6	-do-	-do-
9	1	61.10	-do-	Nodhā Gautamaḥ
10	1	61.12	-do-	-do-
11	1	62.4	-do-	-do-
12	1	80.2	-do-	Gautamo Rāhuganaḥ
13	1	80.3	-do-	-do-
14	1	80.10	-do-	-do-
15	1	85.9	Maruts	-do-
16	1	103.2	Indra	Kutsa Aṅgīrasaḥ
17	1	121.11	Indra and Viśvedevāḥ	Kakṣivān Dairghatamasa Auśijaḥ
18	1	174.2	Indra	Agastyo maitrāvaruṇiḥ
19	2	174.2	Indra	Gṛtsamadaḥ bhārgavaḥ Śaunakaḥ
20	2	11.5	-do-	-do-
21	2	12.2	-do-	-do-
22	2	12.3	-do-	-do-
23	2	12.11	-do-	-do-
24	2	12.12	-do-	-do-

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25	2	15.3	-do-	-do-
26	2	15.8	-do-	-do-
27	2	17.5	-do-	-do-
28	2	19.2	-do-	-do-
29	2	19.3a	-do-	-do-
30	2	22.4b	-do-	-do-
31	3	30.8	-do-	Gāthino Viśvāmitraḥ
32	3	30.9	-do-	-do-
33	3	30.10	-do-	-do-
34	3	32.6	-do-	-do-
35	3	32.11a	-do-	-do-
36	3	33.6	Nadyaḥ Viśvāmitraḥ Indraḥ	Gāthino Viśvāmitraḥ and Nadyaḥ
37	3	33.7	-do-	-do-
38	3	45.2	Indraḥ	Gāthino Viśvāmitraḥ
39	4	16.7	-do-	Vāmadevo Gautamaḥ
40	4	17.1	-do-	-do-
41	4	17.2	-do-	-do-
42	4	17.3	-do-	-do-
43	4	17.7	-do-	-do-
44	4	18.6	-do-	Vāmadevo Gautamaḥ,
45	4	18.7b	-do-	Aditiḥ
46	4	19.2	-do-	Vāmadevo Gautamah
47	4	19.3	-do-	-do-
48	4	19.4b	-do-	-do-
49	4	19.5b	-do-	-do-
50	4	19.6	-do-	-do-
51	4	19.8	-do-	-do-
52	4	21.8a	-do-	-do-
53	4	28.1	-do-	-do-
54	5	30.6b	-do-	Babhrurātreyaḥ
55	5	32.1	-do-	Gāturātreyaḥ
56	5	32.2	-do-	-do-
57	5	32.6	-do-	-do-

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58	5	32.8	-do-	-do-
59	6	17.12	-do-	Bārhaspatyo Bharadvājaḥ
60	6	30.3	-do-	-do-
61	6	30.4	-do-	-do-
62	6	30.5	-do-	-do-
63	6	61.5	Sarasvatī	-do-
64	7	21.3	Indra	Maitrāvaruniḥ Vasiṣṭhaḥ
65	8	6.13	-do-	Vatsaḥ Kāṇvaḥ
66	8	6.16	-do-	-do-
67	8	7.22	Maruts	Punarvatsaḥ Kāṇvaḥ
68	8	7.23	-do-	-do-
69	8	7.24	-do-	-do-
70	8	12.26	Indra	Parvataḥ Kāṇvaḥ
71	8	40.8	Indrāgnī	Nābhākaḥ Kāṇvaḥ
72	9	61.20	Pavamānaḥ somaḥ	Amahīyuḥ Aṅgirasaḥ
73	9	61.22	-do-	-do-
74	10	49.9	Indra	Vaikuṇṭhaḥ Indraḥ
75	10	89.7	-do-	Reṇuḥ Vaiśvāmitraḥ
76	10	111.9	-do-	Vaīrūpo'ṣṭrādaṁṣṭraḥ
77	10	133.2a	-do-	Sudāḥ Paijavanaḥ
78	10	147.1	-do-	Suvedāḥ Śairīṣiḥ

anu svadhāmakṣarannāpo asyāvardhata madhya ā nāvyānām ।
sadhricinena manasā tamindra ojiṣṭhena hanmanāhannabhidyūn ।

RV. I.33.11

svadhām – annam vṛhyādirūpamanukulasya (S) – food

A cloud cannot grow in size by consuming ordinary food. Food of demon Vṛtra should refer to the water continuously accumulating behind the bund. He appeared to be inflating due to accumulating waters.

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svadhām - accumulated waters (P)

akṣaran –meghāt Vṛṣṭā abhavan tadānimayam Vṛtraḥ (S)

- rained from clouds that is Vṛtra.

The clouds will not grow or inflate by raining; rather they should diminish or disappear. Term *akṣaran* refers to rivers and their unceasing flow, which went on accumulating behind the bund, lying in this path.

akṣaran – inexhaustible streams of rivers (P)

Tr: - "Drawing upon food from the inexhaustible (rivers – streams), the demon (Vṛtra) grew (inflated) in the navigable streams. Indra with courageous mind accompanied by powerful weapon (*Vajra*) killed him over (a period of) days."

sa parvato na dharuṇeṣvacyutaḥ sahasramūtistaviṣīṣu vāvṛdhe ।
indro yadvṛtramavadhīnnadīvṛtamubjannarṇāmsi jarhṛṣāṇo andhasā ॥
RV. 1.52.2.

dharuṇeṣu – sarvasya dhārakeṣūdakeṣu madhye (S)

- Staying within the all-sustaining waters.

Indra on slaying Vṛtra rendered these all-sustaining waters free. The free flowing, uninterrupted nature of water was altered by Vṛtra (i.e. an earthen bund) as if he had encompassed the river streams.

nadīvṛtam - nadanāt nadya āpaḥ tāsāmāvarītāram (S) - (as they) make sound therefore *nadyaḥ* i.e. encompassing the river streams.

ubjan - *adhaḥ pātayan* (S)
laid on ground i.e. Vṛtra or the dam was being destroyed.

Tr : 'Indra killed Vṛtra (who was)encompassing the river streams, releasing waters (while) enjoying the Soma juice. He, the unmoving, thousand fold protector (Indra) (stood) firm like mountain in the all-sustaining waters flowing downstream and grew from strength to strength.'

sa hi śravasyuḥ sadanāni kṛtrimā kṣmayā vṛdhāna ojasā vināśayan ।
jyotīmṣi kṛṇvannavṛkāṇi yajyave'va sukratuḥ sartavā apaḥ sṛjat ॥
RV. 1.55.6

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Śravasyuḥ – annam yaśo vātman icchan (S)

- desiring to acquire food or great feats

This interpretation by Sāyaṇa is inappropriate as there is no reference to rains or seed cultivation.

- accumulated water (P)

kṛtrimā - kṛtrimāṇi kriyayā nirvṛttāni (S) - artificial

The *Ṛc* refers to the mountains or ridges suddenly rising due to tectonic upheavals, and not the mountains formed during the geological aeons. It was witnessed by the people then and reflected in this *Ṛc*. Therefore these are called artificial.

kṣmyā - bhūmyā samānam (S) - like earth

This is most authentic reference to the earthen ridge suddenly bulging on the earth. The Indus valley is alluvial plain where tectonic upheaval in the ancient past gave rise to earthen bunds of loosely packed soil, like Allah bund. (Also refer to comments on RV 3.30.9).

vṛdhānaḥ– vardhanaśīlaḥ (S) - tending to bulge

This growth can occur only in the case of an earthen bund, not in the case of raining clouds which diminish on raining. However, interpreting Vṛtra as *megha* i.e. cloud, Sāyaṇa further comments.

kṣmayā iti ojo viśeṣaṇāṁ । śatrūṇāmabhibhavitrā balenetyarthaḥ ।

This interpretation does not apply to the clouds. How can cloud get strength from the bulging earth? But situation can be easily understood if Vṛtra is considered as an earthen bund.

Tr: '(Indra) desiring to achieve high feats destroyed the ever-growing artificial abodes (of demon) on the bulging earth. Having covered heavens, He (Indra), the accomplisher of good deeds released water for worshippers.'

vi yattiro dharuṇamacyutam rajo'tiṣṭhipo diva ātāsu barhaṇā ।
svarmīḷhe yanmada Indra harṣyāhanvṛtraṁ nirapāmaubjo arṇavam ॥

RV. 1.56.5

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ātāsu – ātā iti dinnāma ātāsu vistṛtāsu dikṣu (S)

- "*ātā*" stands for direction i.e. extending in (all) directions.

The situation is visualized as water pool accumulating behind the bund to be extending in all directions as if forming an ocean.

arṇavam - *megham* (S) - Cloud

Here the traditional interpretation of Vṛtra as cloud is not at all applicable. The word *arṇaḥ* occurs in *Nighaṇṭu* twice in Nig. 1.12 for waters and Nig. 1.13 for rivers. It no way refers to clouds. Therefore while attempting to reconcile this deviation, of meaning of *arṇava* i.e. ocean to *megha* i.e. cloud Durgācārya in his commentary on *Nirukta* 10.9 elaborates as follows.

"*arṇavam arṇasvataḥ arṇasā udakena tadvataḥ । sanstyāyān megha saṅghātān udakabhāreṇātiguruṇā*" i.e. to ocean, which is full of (enormous) water (ocean like water) the collection of clouds forming large pool of waters.

There is no need to twist the meaning of ocean to suit the description as Durgācārya has done; if Vṛtra is considered as an earthen bund it was water accumulating and stretching over very long distance. As pointed out by Raikes (1979:301) Allah bund in 1819 A D could accumulate waters stretching over 2000 square miles giving ocean like appearance.

arṇavām – to the ocean (P)

divaḥ - *dyulokāt* (S) - extending from the heavens.

The word *divaḥ* has special significance looking at the extensive area covered by the water sheet behind the earthen bund i.e. Vṛtra. It looked as if waters were extending from the heaven to ocean, covering land beyond the visual limits.

Tr: '(Vṛtra) held back the life sustaining water unmoved (stranded) spread over in all directions as if extending from heavens (to the earth). O Indra, on being invigorated (by Soma juice) you killed Vṛtra in treasure yielding wars and released water to the ocean.'

The following *Ṛc* describes Vṛtra exactly as a mountain i.e. *parvata*. However it was equated to cloud, because of clubbing *parvata* with *megha* in Nig. 1.10 as stated earlier.

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tvam tamindra parvatam mahāmurum vajreṇa vajrin parvaśaścakartitha ।
avāsṛjo nivṛtāḥ sartavā apaḥ satrā viśvam dadhiṣe kevalam sahaḥ ॥
RV. 1.57.6.

parvatam – *paravavantam megham vṛtrāsuram vā* (S)
- periodic cloud or demon Vṛtra

Here *parvatam* refers to a mountain or a ridge rather than a cloud. Then only the subsequent description can be cogently explained. Clouds cannot be seen as shattered, but a ridge or mountain can be. In order to suit the meaning as cloud, Sāyaṇa brought in the periodicity – *paravavantam* to mean *parvata*.

cakartitha – Śakalī ca kṛṣe (S) - shattered (into pieces)
parvaśaḥ - parvaṇi parvaṇi (S) - (shattered) into pieces
sartavai - saraṇāya gamanāya (S) - to stream forth, to proceed

Tr: "O *vajra* wielding Indra, you have shattered that great mountain into pieces with (your) *vajra*; (you) released waters encompassed (by the mountain) to stream forth. (It is) verily you (who) sustains the universe."

The above *Ṛc* is the direct evidence of Vṛtra being in the form of a mountain, mentioned as *parvata*, although for centuries the tradition and Sāyaṇa considered Vṛtra to be a cloud.

It is worth mentioning here that one of the great Vedic scholars of twentieth century and translator of the *Ṛgveda* in Marathi, Late Shri Siddheshvar Shastri Chitrava too did not think it necessary to compromise the meaning of word *parvataḥ* although he too considered Vṛtra to be a cloud. As he translated, three Ṛcs, he wrote in Marathi - *Vṛtracyā pāṣāṇamaya durgācā bheda karūna* i.e. destroying the mountain like fort of Vṛtra (RV. 1.56.6), *parvatakāya vṛtracā* i.e. Vṛtra with mountain like body (RV. 1.57.2) and *vṛtrarūpī mahāna āṇi vistīrṇa parvatālā śatadhā vidīrṇa karūna* i.e. shattering in hundreds of parts of Vṛtra in the form of the great and long stretching mountain (RV. 1.57.6).

All the above narration points to Vṛtra being a mountain or a ridge on the earth.

asyadeva śavasā śūṣantam vi vṛścadvajreṇa vṛtramindraḥ ।
gā na vrāṇā avanīramuñcadabhi śravo dāvane sacetāḥ ॥ RV. 1.61.10

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Śūṣantam – Śuṣyantam (S) - absorbing, soaking, dehydrating

This refers to the drying of down steam flow of obstructed rivers.

vrāṇā- vṛtreṇāvṛtāḥ (S) - covered or enveloped by Vṛtra

avanīḥ – rakṣaṇahetubhūtā apaḥ (S) - (waters) for guarding purpose

Sāyaṇa's interpretation of *avanīḥ* is not convincing. He is compromising on the meaning of the word to make it appear as cloud. In a personal discussion with late Shri Garge Shastri, Vedic grammarian of the traditional school from Nashik, I came to know that he too differed from the interpretation given by Sāyaṇa. He thought that *vrāṇā* refers to the earth and the word is derived from the root *vṛ-* piercing. In that case it is logical to consider *avanīḥ* as the earth. Thus *vrāṇā avanīḥ* becomes pierced earth rather than covered earth.

vrāṇā avanīḥ – pierced earth (P)

Tr: "Indra slaughtered the water soaking Vṛtra piercing the earth with his *Vajra* and released (water) like cows (recovered from marauders); (He) the knower of the wishes of worshipper granted him food."

asmā idu pra bharā tūtujāno vṛtrāya vajramīṣānaḥ kiyedhāḥ ।
gorna parva vi radā tiraśceṣyannarṇāṁsyapām caradhayai ॥ RV. 1.61.12

arṇāṁsi – vṛṣṭi jaḷāni (S) - rainwaters; - waters (P)

As pointed our earlier, nowhere in the RV. text Vṛtra killing is mentioned in connection with rains. So taking meaning as rainwaters is not appropriate.

caradhyai - tāsāmapām caraṇāya bhūpradeśam prati gamanāya
tasya vṛtrasya megharūpasya (S)
- for the movement of waters to the earth from Vṛtra in the form of a cloud

It need not be cloud. It could be water flowing downstream to the ocean.

caradhai – (water) flowing (downstream) (P)
tiraśca – tiryagavasthitena (S) - with the obliquely held (*vajra*)

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The specific reference to the obliquely held *vajra* confirms that Indra killed Vṛtra in an operation like digging with an implement like a crow bar.

Tr: "O Indra! The Lord of all, slayer of enemies, endowed with strength, (we request You to) strike this Vṛtra with your obliquely held *vajra*. Slaughter him (Vṛtra) into pieces and induce waters to flow (downstream) from this (mountain)."

The *Rcs* RV. 1.60.10 and 1.61.12 describe the actual situation, on the earth, as witnessed by the seer Nodhā Gautama.

sa suṣṭubhā sa stubhā sapta vipraiḥ svareṇādrim svaryo3 navagvaiḥ ।
saraṇyubhiḥ phaligamindra śakra valam raveṇa darayo daśagvaiḥ ॥

RV. 1.62.4

While giving the meanings of three words, Sāyaṇa had to twist meaning of these words as he equated Vṛtra as a cloud. Considering Vṛtra as an earthen bund, it cogently explains the description in the *Ṛc*.

adrim - *ādaraṇīyam, vajreṇa chettavyamityarthaḥ ।*
yadvā ḷ adriḥ parvataḥ (S)

- honourable, deserving for being cut by *vajra*, alternatively *adriḥ* i.e. mountain

The first interpretation of word *adri* is far from the truth; second acceptable.

adrim – to the mountain (P)

valam - *megham* (S) - a cloud

According to Nir. 6.2 *vala saṁvarane* i.e. *vala* for encirding. Vṛtra had encircled waters.

valam – to an encircling (bund) (P)

darayaḥ – *abhāyayaḥ । tvadīyaśabdaśravaṇamātreṇa*
megho bibhetītyarthaḥ (S)

- feared, cloud fears by just listening to your voice.

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Sāyaṇa further elaborates the meaning *darayaḥ dṛ vidāraṇe* i.e. cleaving. It is most appropriate for a bund and not for a cloud.

darayaḥ – cleaved (P)

Tr – "O mighty Indra! You are to be gratified with laudatory and well accented (hymns) by the seven sages (who are engaged in sacrifice) for nine and ten months. You cleaved the encircling (demon) mountain with battle cries and induced clear water to flow."

sa dhārayatpṛthivīm paprathacca vajreṇa hatvā nirpaḥ sasarjaḥ ।
ahannahimabhinadrauhiṇām vyahanvyaṁsam maghavā śacībhiḥ ॥

RV. 1.103.2

dhārayat – dhṛtavān (S) - held firmly (the earth)

paprathacca – tām bhūmim vistīrṇāmakarot (S) - spread out the earth.

ahim – antarikṣe vartamānam megham

Here Sāyaṇa had to twist meaning to interpret Vṛtra as cloud. Ahi represents limbless, serpent like, demon spread on the earth. When the bund was cleaved, water appeared to grow out of ocean like pool of water.

vyaṁsam – vigatabhujam vṛtrāsuram (S) - limbless demon Vṛtra

abhinant – vyadārayat (S) - pierced

Tr: "He (Indra) held the earth stable (after an earthquake) and spread it out, killed Ahi, the limbless demon and pierced *Rauhiṇa* with his *vajra*. By his victorious deeds, affluent Indra amputed limbs of Vṛtra and let the waters to flow."

While the limbless demon can be visualized as cut into pieces, if it is an earthen bund, but not when it is perceived as a cloud.

anu tvā mahī pājasī acakre dyāvākṣāmā madatāmindra karman ।
tvam vṛtramāśayānam sirāsu maho vajreṇa siṣvapo varāhum ॥

RV. 1.121.11

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ackre - acaṅkramaṇe sarvatravyāpya vartamāne (S)

- being all pervading

Āśayānam – Āsamanādvyāpya vartamānam (S) - spread extensively

sirāsu – saraṇaśīlāsu apsu (S) - within surging waters

sirā – 1) Any tubular vessel of the body (such as vein, artery, nerve etc.)
2) Vedic – stream (SED-VSA)

The word *sirāḥ* is grouped in the glossary for rivers in Nig. 1.13;

sirāsu therefore indicates the terrestrial streams flowing through channels. This simile will not apply appropriately to the clouds in the open sky where such channels cannot be imagined.

sirāsu – within the terrestrial channels of surging waters (P)

siṣvapaḥ – asvāpayaḥ / vajreṇa hatvā pātitavān (S)

- Laid to rest. Killed with *vajra* and made to fall

Tr: "O powerful and strong Indra! You have enthused (yourself) to make heavens and the earth happy by laying to rest all pervading and leading (among the demons) Vṛtra, lying hidden within the (terrestrial) channels of surging waters."

yaḥ pṛthivīm vyathamānāmadṛṁhadyaḥ parvatān prakupitān aramṇāt /
yo antarikṣam vimame varīyyo dyāmasthbhnāt sa janāsa indrḥ ||

RV. 2.12.2

vyathamānām – calantīm (S) - moving

- rocking, undergoing earthquakes, tremors (P)

adṛṁhat – śarkarādibhirdṛḍhāmakarot (S) -

- rendered stable using sugar etc.
- Stabilized (by his Prowess) (P)

Here Sāyaṇa has referred to the rituals performed during *yajña* where sugar is used as oblation.

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prakupitān – itastatacalitān pakṣayuktān parvatānaramṇāt / niyamitavān /

sve sve sthāne sthāpitavān (S)

- Controlled the winged mountains moving helter-skelter. (Indra) stabilized them in their respective positions.

Tr: "He, O men, is Indra, who made the trembling earth firm, who brought to halt the extremely restless mountains, who measured out the vaster mid-region and who propped up the heaven (H D V)."

While commenting on the *Ṛc*, H.D. Velankar states, "The roots *vyath, pra-kup* and *ram* refer in the *Ṛgveda* to the physical aspect of their meaning rather than to the mental one." (*Ṛksūktaśatī* P 129).

In this *Ṛc* the seer has conveyed emotions of a person who experienced an earthquake, possibly himself. According to modern Richter scale, earthquake of 5 Richters and above can be experienced. These earthquakes last for only a few moments.

The situation can be visualized here. As soon as the earthquake started, the seer or those who experienced it, felt the earth trembling and mountains shaking. They started praying the God Indra. Within few seconds, the shaking earth became steady. They thought their prayers were answered.

yo hatvāhimariṇāt sapta sindhūn yo gā udājadapadhā valasya /
yo aśmanorantaragnim jajāna saṁvṛk samatsu sa janāsa indraḥ //

RV. 2.12.3

sapta – sarapaṇasīlāḥ (S) - fluid

- seven (H D V) (appropriate meaning)

sindhūn – syandanaśīlā apaḥ (S) - running waters- rivers (H D V)

'*sapta sindhūn*' should refer to the rivers on the earth i.e. in Punjab. H. D. Velankar takes the same meaning.

ariṇāt – prairayat (S) - induced

riṅ – sravaṇe (S) - set free

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apadhā - *tatkartṛkānnirodhānniruddhā* (S)
- hindered on account its (Vṛtra's) obstruction

aśmanoḥ – *aśnute vyāpnotyanatarikṣam ityasmāt meghaḥ* (S)
- Occupies i.e. covers firmament i.e. clouds - rocks (H D V)
- stones or boulders (P)

Many scholars have taken meaning of *gāḥ* to be cows. As I have shown later, *gāḥ* should be considered as land segments submerged under the vast stretches of water. On killing Vṛtra, these were cleared.

While interpreting this *Ṛc*, Sāyaṇa had to twist the meanings of some words to show Vṛtra as cloud. But that difficulty does not arise if Vṛtra is taken as an earthen bund.

Tr: "He, who having killed Ahi (the limbless demon), set free seven rivers; who released (submerged) lands by uncovering (the demon) Vala; who created fire at the core of the stones and who acquires wealth in battle. He, O men, is Indra."

sadmeva prāco vi mimāya mānairvajreṇa khānyatṛṇannadīnām ।
vṛthāsṛjatpathibhirdīrghayāthaiḥ somasya tā mada indraścakāra ॥

RV. 2.15.3

prācaḥ - *prāṅmukhān* (S) - to the fore
mimāya - *indro viśeṣeṇa nirmitavān* (S) (Association of Vṛtra with rivers)
- Indra built especially (taking measurements)
khāni - *nirgamanadvārāṇi* (S) - exit doors - flood gates (P)
atṛṇat – *akhanat* (S) - dug
asṛjat - *anāyāsena tāḥ nadīḥ sṛṣṭavān* (S) - those rivers flowing at ease.

Tr: "As if it were abode of altars (or a well measured and planned house), (Indra) measuring with aids, dug flood gates (in the bund) into long travelled paths (channels) with the help of *vajra* for the rivers to flow at ease. Indra did all this when invigorated by Soma (juice)."

This *Ṛc* is factual description of the incident. Before the long stretching bund was breached, Indra, first dug the channels down streams and then he cleaved the bund and released water. *Vajra*, the thunderbolt of Indra, had thousands of spikes. It must have been

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a long device, which could be used for digging channels and cleaving the bund. Indra, possibly was the leader of people in those times. For this great act, Indra was deified in the later period. This act digging of channels does not apply for the rains. It is better applicable for an earthen bund.

bhinad valamaṅgirobhirgṛṇāno vi parvatasya dṛṁhitānyairat ।
riṇagrodhāṁsi kṛtrimāṇyeṣām somasya tā mada indraścakāra ॥

RV. 2.15.8

bhinat – abhinat (S) - demolished

dṛṁhitāni – śīlābhirdṛḍhikṛtāni dvārāṇi (S)-doors reinforced by stones
airat - udghāṭitavān (S) - opened
rodhāṁsi – niruddhāni dvārāṇi (S) - blocked openings
riṇak - udghāṭayat (S) - cleared

Tr: "On being showered praises by Aṅgirasas. (He) demolished Vala, opened the doors reinforced by stones on mountains and cleared the artificial blockades. Indra did all this when invigorated by Soma (juice)."

In the earlier chapter, author has dealt with the instances of the geotectonic movements in the Himalayan region and river paths getting blocked due to landslides. Blockades of this type, are referred in this Ṛc as *rodhāṁsi.* Indra had to dig the downstream channels before digging floodgates in these blockades as referred in RV. 2.15.3. No such arrangement is needed in the case of clouds raining down from the sky.

sa prācīnān parvatān dṛṁhadojasādharācīnam akṛṇodapāmapaḥ ।
adhārayatpṛthivīm viśvadhīyāsamastabhnānmāyayā dyāmavasrasaḥ ॥

RV. 2. 17. 5

prācīnān - itastataḥ prakarṣeṇāñcato gacchataḥ sapakṣān (S)
- Winged (mountains) moving speedily helter-skelter.

Here Sāyaṇa's comment has the context of the legend in which the winged mountain peaks of the Vindhya Mountains in central India roamed helter-skelter. This does not apply to the mountain sleeping on the earth and described as *Āśayānam ahim* (RV. 1.121.11, 2.12,11, 3,32,6;11 etc.).

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Another very important aspect of Vṛtra is to be noted here. On the background of the upheavals, clear distinction has to be made between the ancient mountains - *prācīnān parvatān* - formed ages ago due to volcanic activity and a bund suddenly formed. The volcanic mountains do not wither away like loosely packed earthen bund. These too experienced tremors but appeared stable. New mountains formed, were seen to be withering away. This comparison is valid only in the case of mountains on the earth and not with clouds.

dṛṁhat - *pakṣacchedam kṛtvā bhūmau dṛḍhīcakāra* (S)
- amputating wings rendered (mountains) stable on the earth
- rendered (old volcanic mountains) stable (P)

apām - *meghasthitānāmudakānām* (S) - water held in clouds
- waters held behind bund (P)

avasrasaḥ - *avapatanāt* (S) - prevented from falling down

The earthquake which led to breaching of the bund must have been very intense, such that people and the seer felt as if the heavens were coming down. Usually the earthquakes do not last for a long time. Soon everything got stabilized. They thought it to be the accomplishment of their Lord Indra.

Tr: "He (Indra) with his prowess, held the ancient mountains stable, rendered waters to take the course downstream, nurturer of the universe supported the earth, (Indra) held the heavens from falling down by his magical powers."

ni sāmanāmiṣirāmindra bhūmim mahimapārām sadane sasattha ।
astbhnād yām vṛṣabho antarikṣamarṣantvāpastvayeha prasūtāḥ ॥

RV. 3.30.9

sāmanām – samānām (S) - leveled (earth)

iṣirām – sthānābhāvena calantīm evaṁvidhām (S)
- moving (unsteady) on account of no place (to stay)

sasattha - niveśayāmāsitha (S) - held stable

prasūtāḥ - meghabhedanena preritāḥ (S)
- released due to smashing of clouds

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In the above Ṛc (RV. 3.30.9) *samānām* has great significance. It refers to the leveled earth. It confirms the Indus plains as geographical location where the demon Vṛtra lay obstructing the river waters. The silty tract of the Indus delta and Sindha province is a leveled land. The natural gradient of the land, is as low as 1:8,000 to 1:10,000 (Lambrick 1979: 318). Disturbance in plain land led to formation of an earthen bund like Allahbund.

It disturbed only that segment of the land, holding other vast stretches undisturbed.

Tr: "O Indra ! you have held the vast, unbound, unsteady, leveled earth stable. The bull (Indra) has upheld the heavens and the space from falling (down) and let the water flow."

alātṛṇo vala Indra vrajo goḥ hantorbhayamāno vyāra ।
sugānpatho akṛṇonniraje gāḥ prāvan vāṇīḥ purahūtam dhamantīḥ ॥

RV. 3.30.10

alātṛṇaḥ – bahūdakatayā alamityarthamātṛdyate hiṁsyata ityalātṛṇaḥ (S)

- having acquired large amount of water, hence denying any more
- not granting anything, miserly (SED-VSA)

All these interpretations become clear and miserly nature of Vṛtra becomes relevant if the meaning is taken as:

alātṛṇaḥ - suppressor or captivator (of waters) (P)

valaḥ - vṛṇotyākāśamiti valo meghaḥ (S)

- encircling sky, therefore (circular?) cloud

The description of the demon Vala points to its being in the form of a circular segment. His reptile-like appearance, *ahastam apādam* – handless, footless (RV. 3.30.8) better suits to an earthen bund rather than to a cloud.

gāḥ – *Āpaḥ* (S) - waters, - land segment (P)

(Kindly refer to the comment on RV. 2.12.5)

Tr: "The water accumulating (not letting it flow) Vala, the encompasser of lands (and who thought he was) strong enough to smash (any enemy), ran away out of fear even before you cast your blow (*Vajra* on him). Indra laid down clear paths for water to drain down stream.

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The waters, desirable and invoked by many, issued forth with loudly uttering (hymns in Your praise)."

This *Ṛc* gives poetic description of the incident of the bund being washed away. The seer gives simile of a miserly man for the water accumulating bund, while the water streams rushing forth, making roaring sounds are said to be praising aloud Lord Indra. It is envisaged that the incident the seer possibly witnessed was of bund cleavage occurring due to hydrostatic pressure of water accumulated behind the bund. As there were no rains, no lightening or other natural activity, the seer felt that the demon encircling water yielded even before Indra cast his *Vajra* (thunderbolt).

tvamapo yaddha vṛtram jaghanvān atyān iva prāsṛjaḥ sartvājau ।
śayānamindra caratā vadhena vavrivānsam pari devīradevam ॥ RV. 3.32.6

devīḥ – devanasīlaḥ (S)- bright, effulgent

Tr: "Because after killing the godless Vṛtra who lay sluggishly encompassing the divine waters, with your active weapon, You, O Indra, let loose the rivers to rush onwards like horses at a race." (H D V).

H.H.Wilson translated *Śayānam* as 'slumbering'. This epithet of Vṛtra is worth noting. In any battle fought between two parties or two armies, both of them are expected to be active on the battlefield. Here Indra slays the slumbering demon. Clouds cannot be perceived as slumbering on the earth. The epithet 'slumbering' – *Śayānam*' is most suited to án earthen bund, which could be seen sleeping sluggishly.

Viśvāmitra – Nadī dialogue hymn

It is to be mentioned here that two *Ṛcs* from the famous *Viśvāmitra – Nadīsūkta* RV. 3.32.6-7 led me to conclude that Vṛtra could be an earthen bund, similar to Allah bund discussed in the earlier sections; it also led me to think and propose that slaying of Vṛtra was a terrestrial rather than heavenly or mid-region phenomenon; the incident occurred on the plains of Punjab and Sindh. It was subsequently reinforced by further study of the RV. text.

indro asmān aradad vajra bāhurapāhan vṛtram paridhim nadīnām ।
devo'nayatsavitā supāṇistasya vayam prasave yāma urvīḥ ॥
RV. 3.33.6

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ardat– radatiḥ khanatikarmā akhanat (S)

- (Verb) *radatiḥ* indicates digging operation. (He) dug.

This metaphor is most suited to an earthen bund. It is difficult to apply the metaphor to clouds. So also the rivers namely, Sutudrī (Sutlej) and vipāṭ (Bias) are actual rivers. These are perennial rivers so digging of paths could not be an annual operation. It became a special event when their paths were blocked due to formation of an earthen bund.

apāhan– jaghāna tasmin hate āpaḥ patitāḥ (S)

- Killed. On killing him (Vṛtra) it rained

Here too for letting rains to come down from atmospheric vault, digging of paths is totally inapplicable metaphor.

nadīnām– Śabdakāriṇīnāmapām (S) - of roaring waters

- of the rivers (P)

Although the *Ṛcs* are attributed to the specific rivers, it appears that many more rivers streams were blocked.

Tr: "*Vajra* wielding Indra dug paths for both of us and slaughtered Vṛtra who had captivated river waters. God Savitṛ carried us forward by his handsome hands. (Today) we are flowing unbound at his command."

pravācyam śaśvadhā vīraym tadindrasya karma yadahim vivṛścat ।
vi vajreṇa pariṣado jaghānā''yannāpo'yanamicchamānāḥ ॥

RV. 3.33.7

vivṛścat – udakapreraṇārtham jaghāneti (S) - Killed to let waters flow

- Rent into pieces (RTHG)

pariṣadaḥ – paritaḥ sīdata āsīnān pratibandha kāriṇo'surān (S)

- having enveloped (waters) the obstructing demons

Simile of renting enemy into pieces does not apply to clouds. It is most appropriate for an earthen bund.

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Tr: "That heroic deed of Indra must be lauded for ever that he rent Ahi into pieces. He smote away the obstructer with his thunderbolt (*Vajra*) and eager for their courses forth flowed the waters." (RTHG)

bhinadgirim śavasā vajramiṣṇannāviṣkṛṇvānaḥ sahasāna ojaḥ ।
vadhīd vṛtram vajreṇa mandasānaḥ sarannāpo javasā hatavṛṣṇīḥ ॥

RV. 4.17.3.

hatavṛṣṇīḥ – hato vṛṣā vṛtro yāsām tā hatavṛṣṇyaḥ (S)
- of those whose Lord (captor) Vṛtra was killed.

Apaḥ – vṛtreṇāvṛtānyudakāni (S) - waters encompassed by Vṛtra

Tr: "O Indra, overpowering (enemies) (you) manifested your prowess, directed your *vajra* to smash the mountain. (After) their powerful captor killed, the water flowed forth speedily."

It is to be noted here that Indra directed his *vajra* at a mountain or an earthen bund, *giri*, to kill Vṛtra. This confirms the proposition of Vṛtra being an earthen bund.

etā arṣantyalalābhavantīrṛtāvarīriva saṅkrośamānāḥ ।
etā vi pṛccha kimidam bhaṇanti kamāpo adrim paridhim rujanti ॥

RV. 4.18.6

adriḥ – rock (HDV) - mountain (P)

While H D V takes meaning of *adriḥ* as rock, the proposed meaning 'mountain' makes it more appropriate i.e. mountain holding back the rivers.

Tr: 'Like the law–abiding damsels, these (rivers) are now rushing forward restlessly, surging and thundering in chorus; ask them what they are reciting, what rock, what obstruction have the waters broken through' (HDV).

atṛpṇuvantam viyatamabudhyamabudhyamānam suṣupāṇamindra ।
sapta prati pravata āśayānamahim vajreṇa vi riṇā aparvan ॥

RV. 4.19.3.

atṛpṇuvantam – bhogeṣu atṛpyantam (S) - insatiated at enjoyment

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- insatiated i.e. with waters accumulated or swallowed so far (P)

viyantam - *śithilāṅgam* (S) - body spread loosely

sapta - *sarpaṇasvabhāvāḥ* (S) - fluid by instinct -seven (rivers) (P)

pravataḥ–apaḥ (S) - waters

Yāska elaborates it as '*paryāgatavantam pravatam*' (Nir. 10.20), then *sapta pravataḥ* should mean seven rivers streams.

Āśayānam -*Āvṛtya tiṣṭhantam* (S) - lay encompassing

- Lying on the ground (P)

aparvan - *a parvaṇi paurṇamāsyām* (S) - on the full moon days

The *yajña* rituals were developed to invigorate Indra to kill Vṛtra. The basic ritual of *yajña* system is *Daraśapaurṇamāseṣṭi*. It is performed on full-moon and new-moon day. Since the incident of Vṛtra killing might have occurred on certain full moon day it led to the ritual development accordingly.

Tr: "O Indra, you killed on the full moon day with your *vajra*, the unsatiated (with enormous water swallowed so far) idiotic, ignorant Ahi (the limbless demon) in deep slumber with his body spread loosely (far and wide); who lay encompassing the seven (river) streams."

dṛḷhānyaubhnāduśamāna ajo'vābhinat kakubhaḥ parvatānām ।

RV. 4.19.4b

dṛḷhāni - *dṛḍhāni sthirāṇyabhrāṇi* (S) - the firm clouds

Sāyaṇa's interpretation of *dṛḷhāṇi* is not at all agreeable. None can consider rain clouds being firm when they can be seen moving speedily and changing their shapes frequently. Here *dṛḷhāni* should refer to mountains.

kakubhaḥ – pakṣān (S) - wings, - Summit, peak (SED-VSA)

Tr: "striving, with strength, He (Indra) burst the firm (mountain) asunder and tore away the summits of the mountains." (RTHG)

The above *Ṛc* describes the way bund was broken. Disintegration of the mountain or bund appears to have started from the top layers. It must have been loosely packed. Water

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currents cleaved the bund from top and water rushed forth. This situation cannot be visualized in the case of clouds.

vi yadvarāṁsi parvatasya vṛṇve payobhirjinve apām javāmsi । RV. 4.21.8a

varāṁsi – dvārāṇi (S) - (Flood) gates

vṛṇve - vivṛtāni kṛtavānasi (S) - you opened

javāṁsi - vegān (S) - speedily - torrents (RTHG)

Tr: "Indra opens the (floods) gates of mountains and quickens the water torrents."

adardarutsamasṛjo vi khāni tvamarṇavān badbadhānān ararnṇāḥ ।
mahāntamindra parvatam vi yad vaḥ sṛjo vi dhārā ava dānavam han ॥

RV 5.32.1.

utsam - utasyandamānam megham (S) - springing clouds

- well (nig 3.23 and SED-VSA), spring (Nir. 10.9)

adardaḥ - vidāritavānasi (S) - you pierced

khāni - meghasthodakanirgamanadvārāṇi (S)

- floodgates in clouds for expelling water

asṛjaḥ - viśeṣeṇa sṛṣṭavānasi (S) - Specially built.

It is difficult to imagine that for letting water to be expelled from clouds, Indra had to build floodgates. *khāni asṛjaḥ* taken together point to specially build canals or water-ways for delivering water after cleaving of an earthen bund.

Tr: "O Indra, digging channels, you released roaring waters which were held captive. You have pierced enormous mountains and released water streams. You have also killed demons."

Piercing of the bund was not carried out at random. Well-laid channels appear to have been excavated for releasing water streams. This *Ṛc* also confirms reference to digging of channels mentioned in RV. 2.15.3 and RV. 3.33.6 with reference to killing of Vṛtra.

tvamutsām ṛtubhirbadbadhānān aramha ūdhaḥ parvatasya vajrin ।
ahim cidugra prayutam śayānam jaghanvān indra taviṣīmadhatthāḥ ॥

(RV. 5.32.2)

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Ṛtubhiḥ - *Ṛtuṣu vṛṣṭikāleṣu* (S) - during rainy seasons

- over many seasons (P)

Tr: 'O *Vajra* wielding Indra, you set free the roaring waters (which were) bound together over many seasons by mountains. O ferocious Indra, you killed the sleeping *Ahi* (serpent - dragon); Your process was held supreme.'

Water was held back behind the bund for many seasons i.e. for years as indicated by words *ṛtuṣu*. The incident is stated to be recurring every forty years (RV. 2.12.11). It indicates the long interval between upheavals.

adyā chinnū cittadapo nadīnām yadābhyo arado gātumindra ।
ni parvatā admasado na sedustvayā dṛḷāni sukrato rajāṁsi ॥

RV. 6.30.3

ābhyaḥ - *nadībhyaḥ* (S) - for the rivers
seduḥ - *niṣaṇṇāḥ* (S) - settled

This *Ṛc* describes the situation after an earthquake. During an earthquake the mountains appeared to shake, but Indra rendered them stable. The simile of man sitting at the meals is compared with the firm mountains. In light of above situation the *Ṛc* became clear.

Tr: "At present, verily as of old, that act, (the liberation) of rivers is effective whereby thou has directed them on their course: the mountins have sttled (at thy command) like (men) seated at their meals, doer of good deeds, by the thee the worlds have been rendered stationary." (HHW)

tvamapo vi duro viṣūcīrindra dṛḷhamarujaḥ parvatasya ।
rājābhavo jagataścarṣaṇīnām sākam sūryam janayan dyāmūṣāsam ॥

RV. 6.30.5

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duraḥ – vṛtreṇāvṛtaḥ (S) - encircled by Vṛtra

- stretched over very long distance, over the vast landscape (P)

dṛḷham – dṛḍhamapām bandhaka – pradeśam (S)

- firmly captivating territory for water

- solid barrier for waters (HHW)

In this *Ṛc*, Sāyaṇa considered *parvata* as *megha*. H. H. Wilson came closer to reality by stating the solid barriers for water.

Tr: "O Indra, you have set free the waters (which were) spread on a vast landscape in all directions, (as they were obstructed by Vṛtra) fracturing the barrier of mountains; you became the Lord of all living beings, manifesting together the Sun, the sky the Uṣas (the Dawn Goddess)."

Manifestation of the Sun, the sky and the dawn is to be taken metaphorically. For accomplishing the act of slaying *Vṛtra*, Indra was accorded highest position of the sovereign King among the mortals.

yastvā devi sarasvatyupabrūte dhane hite । indraṁ na vṛtratūrye ॥

RV. 6.61.5

Tr: 'O Goddess Sarasvatī, they invoke you when the war starts (because you protect) as they invoke Indra for slaying Vṛtra.'

Though desiccated long back, the river Sarasvatī used to be a mighty water stream in the Rigvedic times. The seer while praising her gives simile of invoking Indra for killing Vṛtra. It can be inferred that incident of killig of Vṛtra took place much earlier than the event of desiccation of Sarasvatī river. It is also confirmed by the epithet Vṛtraghnī for Sarasvatī given by the seer in RV. 6.61.7. Exact dating of desiccating of Sarasvatī river can help determining help the date of the *Ṛgveda*.

yadasya manyuradhvanīd vi vṛtram parvaśo rujan ।
apaḥ samudramairayat ॥ RV. 8.6.13

parvaśaḥ - parvaṇi parvaṇi parūṣi parūṣi (S)

- joint by joint, limb by limb

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Cutting of a rain cloud limb by limb does not suit the actual observation as confirmed by the following word.

rujan – vibhajjan (S) - dismembered

Tr: 'When his wrath thundered, dismembering Vṛtra joint by joint He (Indra) drove (waters) to the ocean.' (HHW)

The description of dismembering joint by joint is more suited to a long stretching bund cleft at several locations than to an amorphous cloud without any observable dismembering of the body.

sṛjaḥ sindhūmrahinā jagrasānān ādidetāḥ pra vivijre javena ।
mumukṣamāṇā uta yā mumucre'' dhedetā na ramante nitiktāḥ ॥

RV. 10.111.9

vivijre – sarvatra atyantacalitā babhūvuḥ (S) - stormed all over

mumucre – indreṇa mocitā abhūvan (S) - released by Indra

na ramante – ekatra na krīḍanti । kintu sarvatra gamanaśilāḥ (S)

- do not play together but move all over
- do not stagnate (P)

nitiktāḥ – nitarām śuddhā āpaḥ (S) - very pure waters

Tr: "O Indra, when you freed the rivers swallowed by Ahi, they (the rivers) stormed all over, desiring to be released by Indra, they ceaselessly moved with pure waters (nitiktāṅ) and did not stagnate.'

This is factual description of water accumulated by bund. It was polluted and dirty. When the bund was cleaved and water released, pure water was seen to be flowing without stagnating.

śratte dadhāmi prathamāya manyave' hanyadvṛtram naryam viverapaḥ ।
ubhe yattvā bhavato rodasī anu rejate śuṣmātpṛthivī cidadrivaḥ ॥

(RV. 10.147.1).

rejate – kampate (S) - shivers

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pṛthivī—pṛthivītyantarikṣanāma (S)

- the firmament denoted by the name *pṛthivī*
- the earth (P)

In order to justify the location of Vṛtra in the sky, i.e. *megha*, Sāyaṇa compromised on meaning of the word *pṛthivī* i.e. earth, following nig 1.3 where *pṛthivī* is listed in the glossary of names for sky. This is shear twisting of meaning because earthquake cannot be experienced in sky; the hollow space cannot shiver.

It is apparent here that by the time *Nighaṇṭū* was complied, the continuity from the time of the RV. was lost; hence the confusing gloss was formulated. It continued to be accepted even after the times of Sāyaṇa.

Tr: "O Indra, I submit unto thy supreme anger, that (You) with manly vigor, killed the foremost *Vṛtra* and directed waters (downwards) when both the heaven and the earth yielded and the earth shivered of your indomitable mountain like prowess."

7. SAGA OF KILLING VṚTRA

Hymn RV. 1.32 is entirely devolved to the saga of Indra killing arch-enemy Vṛtra. This is the only hymn in the RV. text that deals entirely with the story. In all other hymns there are only few *Ṛcs* at a time or the passing references to the incident of slaying of Vṛtra.

While dealing with the interpretation of this hymn I have made comparative study of the translations and interpretations by Sāyaṇa, H.D.Velankar's and K.F.Geldner's translations in German (Pathak 2001). Seer of the hymn is Hiraṇyastūpa Āṅgirasa and there are fifteen *Ṛcs* in this hymn. For detailed discussion, readers are requested to refer to my earlier mentioned book. Only a few *Ṛcs* are quoted below.

Reader will note that the description in the *Ṛcs* becomes more clear and cogent if we consider Vṛtra to be an earthen bund.

ahannahimanvapastatarda pra vakṣaṇā abhinatparvatānām ||

RV. 1.32.1 b

Tr: "He (Indra) killed ahi (the limbless demon) and released waters. He ripped open the channels (obstructing waters) from the mountain."

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Ripping open the channels is better applicable in the case of an earthen bund, because the act of killing Vṛtra occurred on the mountain as given in the next Ṛc.

ahannahim parvate śiśriyāṇām tvaṣṭāsmai vajram svaryam tatakṣa ।
vāśrā iva dhenavaḥ syandamānā añjaḥ samudramava jagmurāpaḥ ॥
RV. 1.32.2

parvate – in the mountain (as clearly stated)

Tr: 'Indra killed Ahi – (the limbless demon), who had taken refuge in a mountain, by roaring *Vajra* fabricated for Him by Tvaṣṭṛ; the ever flowing waters rushed towards ocean like lowing cows hurrying (to their calves).'

skandhāṁsīva kuliśenā vivṛkṇāhiḥ śayata upapṛkpṛthivyāḥ ॥
RV. 1.32.5 b

vivṛkṇā – viśeṣataścchinnāni (S) - specially chopped into pieces

Tr: "Like chopped into pieces by an axe, (Vṛtra) lay stretched on the ground like cut trunks of a tree lie on the earth."

The simile of cut trunks does not suit the rainwater, for it has tendency to flow. It is rather suitable for an earthen bund pierced into pieces.

āyoddheva durmada ā hi juhve mahavīram tuvibādhamṛjīṣam ।
nātārīdasya samṛtim vadhānām sam rujānāḥ pipiśa indraśatruḥ ॥
RV. 1.32.6

ayoddheva – yoddhṛrahita iva indram (S)
- Indra without combatant (enemy), - Non – fighter (HDV)

HDV gives another meaning of *ayoddheva* as matchless fighter. It does not suit the description of Vṛtra. He is described as limbless in RV. 1.32.7 and therefore he cannot fight.

rujānāḥ - rujo bhaṅge । rujanti kulānīti rujānā nadyaḥ (S)
(root) *rujaḥ* for cleaving. Divide families. *rujānāḥ* are rivers.
- one who breaks his nose or his cart (based on *ruja- anas* or *ruja – nās* (HDV),
- *Der nasenbrecher* (the nose breaker) (KFG)

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- Along the cleaved paths which were different from rivers. (P)

Tr: "The non –fighter, (and) like a drunken being, Vṛtra challenged Indra, the great warrior, (who is) beyond challenge by any combatant (enemy) and destroyer of enemies. The weapon of Indra pierced the enemy and crushed to powder he lay along the cleaved paths.

apādhasto apṛtanyadindramāsya vajramadhi sānau jaghāna ।
vṛṣṇo vadhriḥ pratimānam bubhūṣanpurutrā vṛtro aśayadvyastaḥ ॥
RV. 1.32.7

apāt – vajreṇacchinnātvāt pādarahitaḥ (S)
- Footless on being chopped off by *Vajra.*
- Footless (as formed) (P)

ahastaḥ – hastarahitaḥ (S) - handless

Clouds cannot be imagined to possess limbs, so there will be no question of cutting their limbs. An earthen bund too can be perceived as limbless demon. This is corroborated by HDV who states that, 'Vṛtra is imagined as a reptile, he is said to be devoid of hands and feet.' (HDV 1972:103)

vadhriḥ – chinnamuṣkaḥ puruṣaḥ (S) - important, castrated man

sānau – at the summit (SED-VSA)
- on the shoulder (HDV), -*in den Nacken* (at the nape) (KFG)
- at the peak (P)

All these translators have considered Vṛtra to be living being. So they have considered meaning of *sānau* as shoulder, nake etc. However the meaning appears to be 'at the peak', since the ridge or the bund must have been washed off from the summit where it was loose. It easily collapsed downwards from the summit.

The description, *vṛṣṇo vadhriḥ pratimānam bubhūṣan* means, Vṛtra, even after being crushed thoroughly, tried to gather strength and withstand Indra's attacked. HDV translated it as. 'Seeking to be rival if the mighty (bull) the impotant (bull).' KFG translated it as, '*Der verschnttne (stir) den dem Bullen gewechsen sein wolte,*' 'the spilt part of the bull which tended to grow to the shape of a full bull.'

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The situation can be visualized as under:

The bund was cleaved at the top by the water stream. However silt and other materials gathered behind the bund flowing along water tended to block those openings or cleavages, restoring the shape again. Finally it as washed away and only a few remnants of the bund remained. It is clarified in the next *Ṛc* RV. 1.32.8.

Tr: "The demon devoid of hands and legs (the limbless demon) fought war with Indra, (when) he was struck with *Vajra* at the summit. The mighty (though rendered) impotanat demon tried to reshape again, but lay spreading his dismembered body on the earth."

nadam na bhinnamamuyā śayānam mano ruhāṇā ati yantyāpaḥ ।
yāścidvṛtro mahinā paryatiṣṭhttāsāmahiḥ patsuaḥ śirbabhaūva ॥

RV. 1.32.8.

atiyanti – atikramya gacchati (S) - runs over

mano ruhāṇāḥ – riding on the chariot of mind (HDV)
- *die Gewasser des manu* (the waters of manu) (KFG)
- taking courage (RTHG), - elevated mind (P)

Reference to the waters of Manu by KFG is totally out of tune with the situation.

Tr: "As he lay (helpless) mangled roarer, waters with elevated mind (invigorated and speeding) ran over him. Those very waters which Vṛtra had encompassed by his great expanse, at their feet lies ahi (the limbless demon)."

Interpretation of Ahi-Vṛtra as cloud is at total variance with the description in the above *Ṛc*. It is difficult to explain the situation of Vṛtra as a cloud in sky; on being killed he was to be seen lying on the ground and waters rushing over his dead, dismembered body. It is difficult to imagine rainwater flowing over the drained clouds.

nāsmai vidyunna tanyatuḥ siṣedha na yām mihamakirad dhrādunim ca ।
indraśca yadyuyudhāte ahiścotāparibhyo maghavā vi jigye ॥

RV. 1.32.13

tanyatuḥ – garjanam (S) - roaring

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miham – secanam yām vṛṣṭim (S) - sprinkling of rains

- mist (HDV), - *nebel* (haze, mist) (KFG)

Sāyaṇa's meaning is far fetched. It should mean mist as stated by HDV and KFG.

Tr: "Neither lightening nor thunder proved useful to him. Nor (did) even the mist and the hailstorm, which Ahi spread around him. When Indra and Ahi (the limbless demon) fought, bounteous (*maghavan*- Indra) conquered him all over."

This *Ṛc* possibly points to cleaving of the bund during heavy storm and lightening. However it does not explicitly mention rains or torrents falling down from the sky.

It is to be noted here that in all the *Ṛcs* and also the rest of the *Ṛcs* given in the table 1, the rains are not associated with the act of Vṛtra killing.

As a result of the great feat achieved by on killing Vṛtra, Indra was accorded highest status in the universe and his prowess was adored.

indro yāto'vasitasya rājā Śamasya ca sṛṅgiṇo vajrabāhuḥ ।
sedu rājā kṣayati caraṣaṇīnāmarānna nemiḥ pari tā babhūva ॥

RV. 1.32.15.

sedu – sa evendra (S) - He alone, Indra

carṣaṇīnām – manuṣyāṇām (S) - of the human beings

Tr: "*Vajra* wielding Indra is Lord of (all) that is moving and immovable, of the tamed and (untamed) horned creatures. He alone governs all the human beings as a rim of the wheel encircles the spokes."

It can be concluded that the Rigvedic seers did not conceive Indra as a Rain God and Vṛtra as a cloud holding back river waters. Vṛtra was an earthen bund. In due course of time, over the period of centuries the followers of the Vedic tradition forgot true nature of Vṛtra. By the time of Yāskācārya, equation of Vṛtra as *megha* was firmly established in the minds of the Vedic scholars.

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8. OTHER GODS ASSOCIATED WITH KILLING VṚTRA

Maruts and slaying of Vṛtra

The presiding deities of the hymn RV. 8.7 are the wind gods Maruts. Seer of the hymn, Punarvatsa Kaṇva refers to

1. Earthquake like conditions in *Ṛc.* 8.7.4 – *vepayanti parvatān*
2. Maruts being active on the mountain top in *Ṛc.* 8.7.7 - *ṣṇunā*
3. Maruts help Indra to dismember Vṛtra in RV. 8.7.24– *anvindram vṛtratūrye-*. The *Ṛcs* 8.7.22, 23, 24 deal with slaying of Vṛtra, however the seer is aware that slaying of Vṛtra is Indra's prerogative.

vi vṛtram parvaśo yayurvi parvatān arājinaḥ ।

cakrāṇā vṛṣṇi paumsyam ॥ RV. 8.7.23

Tr: "Independent of ruler, they have divided Vṛtra joint by joint, they have shattered mountains manifesting manly vigour." (HHW).

Sāyaṇa gives meaning of Vṛtra as *megha*. HHW retains the same name.

anu tritasya yudhyataḥ Suṣmamāvannuta kratum । anvindram vṛtratūrye ॥

RV. 8.7.24

Śuṣmam - pareṣām Śoṣakam balam marutaḥ (S)

- Maruts sucking enemy strength,
- Prowers, strength (SED – VSA)

Tr: "They (Maruts) have came to the aid of warring Trita, invigorating his strength and (animating) his acts, they have come to the aid of Indra for the destruction of Vṛtra."(HHW).

Maruts assisting Indra

jaghāna vṛtram svadhitirvaneva ruroja puro aradanna sindhūn ।

bibheda girim navaminna kumbhamā gā indro akṛṇuta svayugbhiḥ ॥ RV. 10.89.7.

svadhitiḥ - paraśuḥ (S) - an axe

svayugbhiḥ - svayam yujamānairmarudbhiḥ (S)

- On being joined (assisted) by maruts.

navakumbham - raw pitcher, unbaked earthen pot

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Here the seer appropriately mentions the simile of unbaked pot, because the bund formed due to tectonic activity must have been loosely bound, composed of loose soil.

Tr: "As the forests are axed, (Indra) killed Vṛtra, demolished bastions (of enemies), demolished mountain like an unbaked (raw) earthen pitcher. He released river waters for us (human beings) when being assisted by Maruts."

Hymn to Indra and Agni: RV. 8.40

Presiding deities of the hymn RV. 8.40 are Indra and Agni together. In *Ṛc* 8.40.8, though both the deities are praised for having liberated waters, no significant aspect of Agni's involvement is mentioned. However this *Ṛc* contains word Vrata for which there is special comment by great Vedic scholar V.M.Apte.

yā nu śvetāvavo diva uccarāta upa dyubhiḥ ।
indrāgnyoranu vratamuhānā yanti sindhavo yān
sīm bandhādamuñcatām nabhatāmanyake same ॥

RV. 8.40.8

In the article 'All about *vrata* in the *Ṛgveda*' (Bulletin of Deccan college Res. Insti. Vol. III pp. 407-488) V.M. Apte has translated this *Rc* and commented on the word *vrata*:

Tr: "Those two resplendent ones who rise from below the sky upwards with their rays, bearing on in accordance with the *vrata* (those very) Indra and Agni, the Rivers go on–the rivers which they released from restraint."

Comment: 'It is well known in the mythology of the RV. that Indra who released the streams pent up by dragon (RV. 2.11.2) dug out channels for them (RV. 2.15.3); the meaning of *vrata* here can therefore only be the paths or channels chalked out for the waters by Indra (and Agni). The two Resplendent ones (*Śvetau*) I take to be Indra and Agni (following Sāyaṇa).'

(V.M. Apte)

Soma assisting Indra

The ninth *maṇḍala* of the RV. is devoted to the plant deity Soma. In a hymn from this *maṇḍala*, it is expected that the seer of the hymn would adore Soma as Vṛtra slayer as in *Ṛc*

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RV. 9.61.22, but he is aware that it is only Indra who kills Vṛtra. Soma plays secondary role of protecting Indra.

sa pavasva ya āvithendram vṛtrāya hantave | vavrivānsam mahīrapaḥ ||

RV. 9.61.22

Tr: 'Flow Thee (O Soma) protecting Indra for killing Vṛtra who has obstructed enormous (quantity of) waters.'

Indra and Viṣṇu Collaborating

RV. 8.100.12 mentions about common endeavour of Indra and Viṣṇu to kill Vṛtra and letting water to flow.

hanāva vṛtram riṇacāva sidhūn

Tr: "Let us (both) kill Vṛtra and release the rivers."

Trita Aptya slaying Vṛtra

RV. 1.187.1 mentions about *Trita Āptya* dismembering Vṛtra and killing him *vṛtram viparvamardayat*

Tr: "(He) dismembered and killed Vṛtra."

It is to be noted here that in the Avestan lore, it is counterpart Threataona, an angel who is slayer of the serpent demon azi dahāka rather than an angel named verethraghna, whose name is directly derived from *Vṛtraghna*.

9. SUMMARY OF THE ṚCS DEALING WITH VṚTRA SLAYING

From the 93 *Ṛcs*. in the *Ṛgveda* listed in Table 1 above, various facets of the act of *Vṛtra* slaying emerge. They are :

1) The demon Vṛtra lay in the path of river streams obstructing their flow and accumulating water: 1.33.11, 1.52.2, 1.54.10, 1. 62.4, 1.121.11, 2.30.10, 4.17.1, 5.32.6, 5.32.8, 10.111.9.
2) Vṛtra had taken refuge in mountains: 1.51.4, 6.30.5.
3) Vṛtra is also called as a) Ahi - a limbless demon: 1.51.4, 2.11.2, 3.30.8, 5.32.8, b) Vala - an encircling demon : 3.45.2.

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4) Water was released downstream rushing to ocean when Ahi – Vṛtra was killed: 2.19.3, 4.16.7, 6.17.12, 6.30.4.

5) Abodes or residing places of the water obstructing Vṛtra were artificial i.e. *kṛtrimāṇi*: 1.55.6, 2.15.8.

6) There is clear distinction between the mountains formed during geological aeons and those formed suddenly due to tectonic upheavals: 1.55.6.

7) The demon Vṛtra – Ahi, in the form of mountains lay sluggishly on the ground as indicated by the word *śayānam*: 1.121.11, 2.12.11, 3.32.6, 4.17.7, 4.19.2-3, 5.30.66, 5.32.2-6-8, 6.30.4.

8) The demon in the form of mountains was rent into pieces: 1.57.6, 1.61.2, 2.19.2, 3.33.7, 4.17.7, 4.19.4-5, 8.6.13, 8.7.22-23.

9) To kill Vṛtra, Indra had to pierce the earth with *vajra*: 1.61.10.

10) Indra held *vajra* in oblique position akin to digging RV. 1.61.12.

11) Tvaṣṭṛ fabricated the novel weapon *vajra* for Indra to kill Vṛtra: 1.80.10, 1.85.9.

12) Indra released land segments covered by water after killing Vṛtra. The land is indicated by word *gauḥ*: 2.12.3, 3.30.10.

13) Indra renders the earth, mountains and firmament stable pointing to earthquake like conditions associated with Vṛtra–Ahi: 1.103.2, 2.12.2, 2.17.5, 3.30.9, 4.6.7, 4.17.2, 6.30.3, 10.147.1.

14) Water accumulated in the dark mountain caves: 1.54.10, 2.11.5.

15) Indra did not kill Vṛtra instantaneously but over a period of days. This was the situation when it took time to clear the bund: 1.33.11.

16) Act of killing of Vṛtra was repeated periodically: 2.21.11.

17) Indra dug water channels for letting the water to flow downstream after Vṛtra was killed: 2.15.3, 3.30.10, 3.33.6, 4.19.2, 5.32.1, 10.89.7.

18) Vṛtra is compared with raw unbaked pot: 10.89.7.

19) On killing Vṛtra, the river water moistened a desert: 4.17.2.

20) Indra rendered the river streams navigable by killing Vṛtra : 1.33.11, 4.19.6.

21) Indra and Vṛtra war fought on the earth among the human beings: 1.85.9.

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22) Ahi – Vṛtra was son of Danu: 2.12.11, 3.30.8.

23) Vṛtra possessed magical powers of a sorcerer: 2.11.5, 5.30.6.

24) Indra was newly born god for killing Vṛtra: 4.17.2, 4.17.7.

25) Indra's mother Aditi asserts triamph of her son: 2.12.11, 4.18.7.

26) Indra is invigorated by

a) Soma: 1.52.2, 1.56.5-6, 1.80.2, 2.15.3, 3.9.9, 4.17.7, 5.32.8.

b) *uktha* chantings: 2.11.2.

27) Indra killed Vṛtra on a full moon day: 4.19.3.

28) Indra is aided by Maruts in the act of slaying Vṛtra: 8.7.27, Indra and Agni kill Vṛtra together; 8.40.8, 10.89.7. These are only mentioned in the *Ṛcs* with respect; the real slayer of Vṛtra was Indra.

29) Indra was accorded the status of supreme God among all the Gods for accomplishing the feat of killing Vṛtra: 6.30.4-5.

30) River Sarasvatī, now desiccated, was a living water stream when the act of killing Vṛtra took place: 6.61.5.

31) Indra has not been responsible for rains. Nowhere any word related to rains- *vṛṣti* - is mentioned in any of these hymns.

32) As pointed out by many other scholars, there already exists a god Parjanya who was the God of rains. Killing of Vṛtra is not associated with raining. Indra became rain God in the post Vedic period.

10. CONCLUSIONS

These *Ṛcs* are taken from different hymns. They were composed by seers of different clans and possibly belonging to a period spread over many generations. However, they point to the same phenomenon.

Earlier scholars have interpreted the Vṛtra myth in the *Ṛgveda* in several ways. But the *Ṛcs* can be satisfactorily explained without compromising the meaning of words if Vṛtra – Ahi – Vala are interpreted as a loose earthen bunds formed due to tectonic upheavals.

Vṛtra lay on the ground, mountains like spreading far and wide, as if he was a limbless demon - Ahi and appearing like a segment of a circle Vala, encompassing water behind him.

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Indra killed Vṛtra joint by joint. Moistening of a desert and migration of the river Sarasvatī can be understood as a phenomenon related to Vṛtra slaying.

It is worth nothing that there is not a single *Rc* describing Vṛtra attacking Indra, or the demon running away from the battlefield. Though Vṛtra was called Asura, a sorcerer, he never gives any impression of being an animated entity. He never counters Indra with any weapon; Indra does so by using *vajra* specially fabricated for him. There is no information about Vṛtra's army though the plural number term *vṛtrāṇi* is used.

As Vṛtra has been noted as a drought demon, a water accumulating cloud, on killing him it should rain heavily. But there is no mention of raining at all on slaying of Vṛtra.

Nature of the IndraVṛtra war

The hymn RV. 1.32 exclusively deals with the saga of the Indra-Vṛtra war. It describes Vṛtra as a limbless demon, also denoted by Ahi in 1.32.7.

Vṛtra resides on the mountains: 1.32.1.

He had spread himself far and wide enricling waters: 2.32.8, and obstructing the courses of rivers: 1.32.10.

Indra rent the body of Vṛtra into pieces dismembering him: 1.32.5.

He was thoroughly crushed to powdery form on the earth: 1.32.11.

WhenVṛtra was killed the river waters were released and flowed over his body: 1.32.8 and 1.32.14.

Indra used *vajra* to kill Vṛtra: (1.32.2, 5, 12).

On killing Vṛtra Indra was accorded sovereign position for all the moving, immovable, the tame and furious and reigned over all the tribes of human beings. His supremacy was established forever: 1.32.15.

It can be concluded that the Rigvedic seers did not conceive Indra as a rain God and Vṛtra as a cloud. Vṛtra was an earthen bund, as proposed earlier. In the course of time, the true nature of Vṛtra was lost sight of by the people and by the time of Yāska, equation of Vṛtra as a cloud was firmly established in the minds of Vedic scholars.

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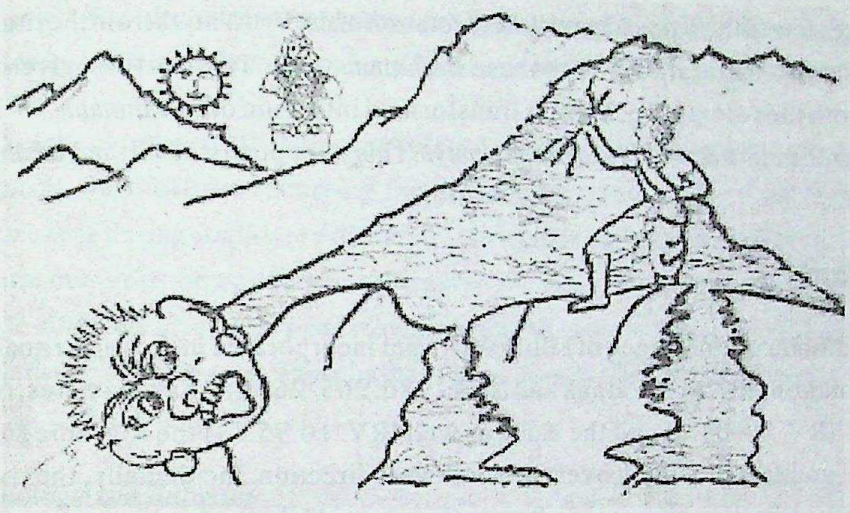

Fig. 7 Authors perception of the Indra – Vṛtra conflict

11. VṚTRA EPISODE IN THE POST – RIGVEDIC PERIOD

The Vṛtra myth in the YV. & AV.

The Vṛtra myth Indra killing Vṛtra and release of waters are just mentioned in both the *Yajurveda* and *Atharvaeda* texts.

Demonology of Vṛtra in *Brāhmaṇa* texts

There was substantial time gap between compilation of the RV. text and the *Brāhmaṇa* texts associated with the individual *Veda* texts. Vṛtra was personified and transformed into a demon. There are passing references to the three headed Viśvarūpa, the son of divine artisan Tvaṣṭā in RV. 10.8.8 and RV. 10.99.6. According to the later narrations, Indra killed him. Tvaṣṭā was infuriated. He performed sacrifice to beget a son capable of killing Indra. References to Viśvarūpa in the RV. text only indicated that towards the later period. The super natural and demonic aspects of the Vṛtra episode were being slowly developed. But there appears to be no direct link between the physical aspects of the Vṛtra episide in the Rigvedic text and the *Vṛtra* legend as described in the *Brāhmaṇa* literature. The *Brāhmaṇa* literature emphasises more on the ritualistic aspect of *yajña* performance, where Vṛtra is described as a demonic spirit. It had to be smitten through ritualistic performances. In the text below two major

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Brahmaṇa texts, namely *a) Śatapatha Brāhmaṇa* (S B) and *Aitareya Brāhmaṇa* (A B) are considered for review of the Vṛtra legend. Interpretation of the Vṛtra myth from the ritualistic point of view is most elaborated in both these *Brāhmaṇa* texts. There is twist given to the Vṛtra story in both these texts, i.e. Vṛtra is transformed into a son of a *Brāhmaṇa*. On killing him, Indra incurred most heinous sin of *brahmahatyā*. This story persisted till the *Mahābhārata* and epic period.

Oblations to *Nirṛti*

The symbolic performance of killing Vṛtra got incorporated in the *yajña* rituals also in the form of oblations to Nirṛti (Pathak and Naik 1986: 265-269). As Sāyaṇa states, *Nirṛteḥ pāpadevatāyāḥ* (RV. 7.104.9) and the earth as well (RV. 10.95.14) the Rigvedic goddess Nirṛti is the evil goddess presiding over the southwest direction. Incidentally, the rivers in Punjab flow in the same direction as they flow to the ocean. Mahīdhara in his commentary on VS. 12.63 states *Nirṛtiḥ kṛcchapattiḥ*. She is offered oblations during *Agnicayana* and *Rājasūya yajña* (SB 5.2.3.2-3) in the *Naiṛtya diśā* at spot called *iriṇa*. Oblations are offered to Nirṛti chanting VS. 12.62. Mahīdahra describes *iriṇa* as *dakṣiṇasyām diśi gatvā svayaṁsphu ṭite bhūbhāge ūṣare vā ulmukāgnim saṁsthāpya juhoti nirṛtiratra pṛthivī*. Procedure is further elaborated in *Taittirīya Brāhmaṇa* 1.6.1 where Nirṛti is identified with unproductive land Tai. Br. 1.6.1.1. During the *Rājasūyayajña* the *yajamāna* collects the leftover floor of *puroḍāṣa* in *sruvā*. He carries a burning stick from the *dakṣiṇāgni* in south-west direction where *iriṇa* is situated. From the above description *iriṇa* can be understood as crevasse like spot on land. It is unproductive where nothing grows. It is saline *ūṣara*. In absence of such a spot, salt was spread to create an artificial spot. These are codifications of the reminiscences of the Vṛtra episode in the post Rigvedic period.

A natural crevasse *iriṇa* or saline land can be explained in light of tectonic upheavals and the land salinity in the region around Mohenjodaro. Very high underground water table and rapid evaporation of water leading to salinity and rendering of land unproductive is reported around Mohenjodaro. The Indus river bed is at higher level than the surrounding area like Jacobabad. In the ancient times it used to flood the entire region and part of the summer flood streams used to get diverted to Eastern Nara stream in the Thar dessert, which is now desiccated (Fairservis 1979: 79-80).

During *Agnicayana* rite *iṣṭikā* bricks were laid in the natural crevasse. Later on *Yajamāna* pours water on the spot and liberates himself from the bonds of Nirṛti. Oblations to Nirṛti at the *iriṇa* spot are to be offered by the King performing *Rājasūyayajña*. SB clearly

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states that the king should perform the ritual in imitation of the act of slaying of Vṛtra by Indra : *etena vā indro vṛtramahannetena eva vyajayata yā syeyam vijitistāmtatho evaiṣa etena pāpmānam dviṣantam bhrātṛvyam hanti tatho eva vijayate bhaye nāṣṭre sūyā iti* (SB.5.2.3.7).

Author proposes that the priest class during the Rigvedic period introduced the ritual of *yajña* to ward off the recurring incidents of tectonic upheavals and the sacrificial performances during *yajña* were directed at invigorating Indra to kill Vṛtra. The *Brāhmaṇa* literature composition appears to have extended over the period of centuries. During the time of composition, stories were woven ground the acts of *yajña* ritual to accord sanctity to the ritualistic performances. There lie the roots of demonology of Vṛtra developed in particular in the SB. and AB. texts.

Demonology and Religion

Demonology is defined in the Websters Dictionary as 1) 'A branch of learning that deals with demons or with popular beliefs in or superstitions about demons and evil spirits, also a treatise on demon or on belief in them, 2) A systematized religious doctrine of evil spirit.

Since the ancient times, human society has attributed its calamities and misfortunes to the demons and evil spirits. Some members among the society claimed to hold power to ward off the evil influences by performing some magical acts. These people became the priestly class or shamans. In the *Brāhmaṇa* texts Vṛtra become an archdevil and the priestly class developed intricate *yajña* rituals to invigorate Indra to kill Vṛtra as its evil influence kept on recurring. As frequently mentioned in the SB. text, *Darśapaurṇamāśeṣṭi*, the basic *yajña* ritual had to be performed every fortnightly to invigorate Indra to kill Vṛtra (S B. 1.6.4.12-13, 6.2.2.19). There were many rituals linked with slaying of Vṛtra, performed during *yajña* such as application of *traikakuṇḍa añjana*, collyrium by *yajamāna*, offering Soma from five *grahas* (glasses).

1) The wooden sword called '*sphya*' and the sacrificial post *yūpa* used in the *yajña* ritual represented part of *vajra* used by Indra to kill Vṛtra.

2) *darbha* grass had survived the onslaught of Vṛtra and stood erect, so it had to be used during *yajña.*

There are many such rituals associated with Vṛtra killing.

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The *Brāhmaṇa* texts elaborate on *yajña* performances giving legends and reasons behind certain acts performed.

Vṛtra legend in SB.

Over the period the *yajña* system developed and various ritualistic performances were explained on the background of Vṛtra episode. In the SB. text, Vṛtra's appearance is attributed to an incidence of Indra killing three headed son Viśvarūpa of Vedic god Tvaṣṭā. One full chapter SB. 1.6.3 is devoted to this story. This story is echoed in the 10th *maṇḍala* of the RV. 10.8.8-9 and 10.99.6. In RV. 10.8, *Tvaṣṭṛputratriśirā* as seer proclaims his killing by Indra.

In SB. 1.6.39 *danu* and *danāyu* became parents of Vṛtra who rolled. It only points to the non-human origin of Vṛtra.

Association of new-moon and full moon sacrifice and oblations to invigorate Indra to kill Vṛtra are referred in 1.6.4.12-13. On account of killing Vṛtra Indra is bestowed with honour of being called Mahendra, the Great Indra (SB. 1.6.4.25)

He is offered great oblation-*Mahāhavi* by other gods to invigorate him to kill Vṛtra (SB. 2.6.1.1, 2.6.2.1). Act of applying collyrium is performed as fallout of Vṛtra killing (SB. 1.3.11-12). Strangely in SB. 3.9.4.10 in many instances Soma plant is equated with Vṛtra and Soma pressing is skin to killing Vṛtra. A story is incorporated that once Vṛtra had captivated the Vedic verses and these had to be released. They performed *Traidhātavīyeṣṭi* to release three Vedas. A sacrificer has to perform *Traidhātavīyeṣṭi* to invigorate Indra to kill Vṛtra with backing of Viṣṇu. (SB. 5-5-5.1-8). In this passage Vṛtra is not only a demon but keeps three Vedas captivated. Indra's hurling of *vajra* at Vṛtra forced him to release the Vedas one by one.

In other passage SB. 6.2.2.18-19 there is reference to the full moon night, which is to be first night of the year and an animal was slighted for Indra having killed away Vṛtra. This observation is dealt in a following section on dating the Vṛtra myth.

Other passages dealing with slaying of Vṛtra are SB 7.2.3.2, SB. 7.4.1.13, SB. 9.5.2.4. These deal with rituals performed during *yajñas*. All this description is metaphorical and as stated earlier at a great variance with the Rigvedic *Ṛcs*.

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Vṛtra episode in the *Aitareya Brāhmaṇa*

I have consulted *Aitareya Brāhmaṇa* (AB.) translation by Martin Haug (1863, reprinted in India in 1976) and *Sukhapradā vṛtti* by Sadguruśiṣya.

AB. 1.4.25-26 refers to use of the RV. verses in the *upasada* ceremony.

Agni-Soma, dual deities receive animals in sacrifice for having helped Indra to kill Vṛtra (AB. 2.1.3).

AB. 4.1.2 refers to the origin of *nānada sāma* in a fearful noise Vṛtra made when Indra struck him with *vajra*.

AB. 7.28 refers to exclusion of Indra and along with him the whole *Kṣatriya* caste from drinking soma juice during *yajña* on account of killing Vṛtra and Arurmaghas. As Martin Haug notes, Arurmaghas was a kind of degraded Aryan tribe of the ancient Iranians. In the text of Zend Avest, the words *aurvo* and *magha* are frequently mentioned.

It can be noted from the above passages that composition of the *Brāhmaṇa* literature took place centuries after the Rigvedic lore and the region in which they were composed were also far off from the Vedic Sapta Sindhu region where the tectonic upheavals occurred. They also reflect very different social situation, ridden with Brahminical rituals dominating the sacerdotal performances. Chanting of the Vedic passages played crucial role in killing of Vṛtra; Indra's place in the whole scenario became secondary. In fact as described in AB. 7.28, Indra was denied his most liked draught of Soma juice for a) having killed Vṛtra who was elevated to the status of *Brāhmaṇa* b) for killing Arurmaghas and c) scolding Bṛhaspati. This is much later development. Animation of Vṛtra in the form of evil spirit, evolution of rituals to overcome the evil influence, etc. are the parts demonical lore developed in the Brāhmaṇa texts around the original Indra-Vṛtra conflict in the RV. lore.

12. DATING THE VṚTRA EPISODE

This is the most controversial topic for the last century and lot of great scholars have put in their efforts to come to conclusions in this regard.

A brief review to be taken here starts from the great scholar Max Muller who arbitrarily set the date of the *Ṛgveda* around 1500 BCE. He arbitrarily allocated three hundered years each for Upaniṣadas, Araṇyakas, Brāhmaṇas texts from the date of Lord Buddha in 6th century

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BCE. Since then the western scholars have got themselves struck within the time frame of 1500-1200 BCE for the *Ṛgveda* text, which is the oldest extanct text of the Vedas. There are numerous scholars and historians who have preferred to follow the same track and our history text books continue to echo the Aryan Invasion theory and dating RV. around the same period. There are many other scholars who have broken out of this time frame and estimated the dates of *Ṛgveda* and *Brāhmaṇa* texts far beyond this period. The most prominent among them and the first Indian scholar was Lokmanya B. G. Tilak. He argued for the date of part of Tai. Sam. around 2350 BCE, based on the statements in Tai. Br. about commencement of the New Year on the day of vernal equinox: '*mukham vā etad nakṣatrāṇām yatkṛttikā*' (Tai. Br. 1.1.2.1). 'It is more natural to presume that the vernal equinox coincided with the *Kṛttikās* at the time when the *Taittirīya Saṁhitā* was compiled.' (Tilak, orion, 1956:42).

Tilak has dealt in depth with passage from Tai. Sam. 7.4.8 and *Tāṇḍya Brāhmaṇa* 5.9 where it is mentioned that full moon night in the month of *Phālguna* was the first night of the year: *mukham vā etat saṁvatsarasya yatphalgunīpurṇamāso mukhata eva saṁvatsaramārabhya dīkṣante* in Tai. Sam. 7.4.8 with slight variation in *Tāṇḍya Brāhmaṇa* as: '*mukham vā etat saṁvatsarasya yat phālguno mukhata eva tat saṁvatsaram ārabhya dīkṣante.*' (Ta. Br. 5.9.8).

Tilak has dealt on shift in the texts from *yatphalgunīpurṇāmāso* to *yatphālguno* and has tried to show that in the days of sacrifice occurring on the fullmoon day in *phālguna*, the year commenced not on the day of vernal equinox but with winter solstice (Tilak 1956:56).

This tradition is directly connected with Vṛtra slaying associated with *yajña* ritual as mentioned in SB :

tadvai phālgunyāmeva । eṣā ha saṁvatsarasya prathamā rātriryat phālgunī paurṇamāsī yottaraiṣottamā yā pūrvā । mukhata eva tat saṁvatsaramālabhate ॥ (SB. 6.2.2.18)

sa vā iṣṭāiva paurṇamāsena । atha paśumālabheta paurṇamāsena vā indro vṛtram pāpmānam hatvāpahatapāpmai tatkarmārabhata tathaivaitatyajamānaḥ paurṇamāsenaiva vṛtram pāpmānam hatvāpahatapāpmai tatkarmārabhate ॥ (SB. 6.2.2.19).

The above passages from SB. clearly point to the association of episode of Vṛtra killing with commencement of *yajña* on the fullmoon day of *Uttarā Phālgunī* constellation, when the New Year commenced.

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It is clearly mentioned in Tai. Br. that full moon day on *Pūrvā Phālgunī* contalletion was the indication of end of the year where as year commenced with *Uttarā Phālgunī*. The original text is : *eṣā vai jaghanyā rātriḥ samvatsarasya yat pūrve phālgunī eṣā vai prathamā rātriḥ samvatsarasya yaduttare phālgunī*. (Tai. Br. 1.1.3.8).

It is to be concluded here that the *brāhmaṇa* text refers to the astronomical positions where the vernal equinox occurred in *Uttarā Phālgunī*. Taking into consideration the recession of equinox, the exact occurrence of the celestial position according to calculations belonged to 12200-12800 BC. It is given by Vaidya in a diagram (Vaidya 1964: 36).

If we take Tilak's proposition that in remote antiquity, the year commenced at the winter solstice, the time is pushed forward by 90*72=6480 years i.e. roughly to 1300-6480=6520 BCE.

Are we ready to assign such an antiquity to the *Brāhmaṇa* and *Ṛgveda* passages? I leave this question to the scholars in future when more diverse data is likely to be generated. Let them confirm the statements made in these *Brāhmaṇa* texts.

13. DRAGON MYTH IN IRAN AND CENTRAL ASIA

Origin of the Dragon myth in India

Ṛgveda and *Brāhmaṇa* texts point to the development of the dragon myth as we understand it today. The Vṛtra legend underwent the following changes starting with an earthen bund in reality.

1. An earthen bund was formed in the Indus and tributary valley region accumulating river waters upstream. It was destroyed by a) hydrosticc pressure, b) torrential rains and c) human endeavour, where leadership was attributed to Indra.

2. The incidence of formation of bund repeated a few times and took root in the social mind and perceived as tradition.

3. The long stretching bund was viewed as limbless demon by the seers.

4. The bund was equated with *Ahi*-serpent-python who could make god, except Indra to fear and run away.

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5. Indra used multipronged *vajra* to kill Vṛtra and released dawn, the sun and the moon.

There appears a gap in understanding on the nature of Vṛtra after this stage.

6. Divine carpenter was angered when his son Viśvarūpa with three heads was killed by Indra. He performed sacrifices to ask in boon a son, who was Vṛtra. He too was killed by Indra.

7. Killing Vṛtra Indra incurred unexpengeable sin of killing a Brahmin.

Dragon Myth in Sumer and Central Asia

The dragon myth captured the imagination of the Vedic seers. They expressed it in many hymns of the Rigvedic lore. The legend traveled to distant lands and the people there further embellished it, giving different dimensions to the myth. I have earlier dealt some aspects of the Vṛtra episode related to the Indo-Iranian texts (Pathak 1997:28-98). It will be interesting to explore the nature of the transformation of the dragon slaying myth of Marduk accomplishing the feat of killing the dragon in the ancient Near East and in Bactria. Shuker (Shuker 2003) has taken very good pictorial review of the dragon myth all over the world. He has given the dragon myth prevailing in different countries. Although the myth can be traced back to a few millenia BCE, it was embellished, modified and nature of the serpent dragon underwent stylistic changes in due course of time. New heroes killing serpent were added. In Greece dragon got transformed into Hydra, a multi headed monster killed by the Greek Hero Hercules. In the Christian domain St. George, riding a horse killed him.

The pictorial presentation of the dragon myth is more common in the ancient Near East and in Bactria compared to the Indus seals and Indian art. Out of more than two thousand Indus seals excavated so far and numerous pictures on the Indus pottery, there is only single specimen from Lothal, which can be related to the dragon myth. It is really surprising. The myth transformations and cross cultural exchange need detailed survey and analysis.

The Indus Civilization had direct contacts with the Near Eastern countries since ancient times (Ratnagar Shereen:1981 and During Caspers: 1971). We find the Vedic myth traveling to the west in the ancient times. The Vṛtra myth travelled along the trade route. It is possible to trace it based on the archaeological evidences.

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The mythical dragon harmed life on the earth and the universal order. He was ultimately slain by the superior deity. This was a very popular myth in ancient Iran and the Near East. There are several seals, which depict the ancient Gods such as Marduk, Adad (Legrain 1925: 227, 266, 269, 274, 316, 317) killing the dragon. The physical features of the dragons depicted on these seals differ. These dragons are shown with wings, with human face, crowned, horned, with feather tail, with scorpion tail, winged, etc. The myth was so widespread, that these seals were almost evenly distributed throughout the Near East. It remained in vogue for centuries so that the dragon killing God's figures underwent stylistic changes in accordance with the cultural influences. From the physical features of God killing a dragon, it is possible to distinguish between say Assyrian, Babylonian or Persian origin of the seals. It is Marduk who is often attributed the act of slaying the dragon. However a lesser deity Nabu is also shown along with Marduk on the seals from the Near East.

Iranian Dragon Myth

There is an angel Verethragna in the Avesthan text. According to Duchesne-Guillemin:

"Three theories have been advanced to explain this God. It is a question of interpreting quasi-identity of the term with Sanskrit *Vṛtrahan*, the epithet of Indra. India associated Indra with a dragon slaying for which she gives him the title *Vṛtrahan* 'Slayer of Vṛtra'. Iran knows a God who shares many of Indra's traits, except precisely (at any rate in the Avestan version) that of dragon-slayer. Iran knows no dragon called Verethra. This word is a neuter and means defence.

According to general opinion today *Vṛtrahan* dates back from Indo-Iranian times, and was a warrior God and dragon killer. He survived in Iran in the form of a Verethragna who is not accredited with a dragon slaying as a result of a kind of sublimatory process, which however was not applied to the entire Iranian domain since Vahagn, the Armenian counter part of the God, who is direct borrowing from Iran, does kill a dragon." (Duchesne Guillemin 1973: 125).

The dragon killing myth was prevalent among the Iranians. The ancient mythical angel Thraetaona and hero Keresaspa are accredited with the feat of slaying the dragon Azi Dahaka. The dragon Azi Dahaka is described in the Avesta as three jawed, triple headed, six eyed dragon with thousand power (Hom Yashta 8-11) (Eduljee 1983: 32-86). These are the features of Viśvarūpa son of Tvaṣṭā.

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Some Transformations

In the Armenian legend the God Vahagna killed the dragon Azo Dahaka. The Armenian people borrowed the deity from Zoroastrians in the pre-Hellenic times. He was compared with Heracles and attributed dragon killing (Hasting 1980: 798-803). The *Ṛgveda* text refers to *Ahi Dāsa*. The transformation can thus be summarized as follows:

Vṛtraghna ——→ *Verethragna* ——→ *Vahagna*

Ahi Dāsa ——→ *ajhi dahāka* ——→ *ajho dahāka*

Brāhmaṇa *Yasht* Armenian folklore

It confirms that the myth originated in the Indus and neighbouring region (Pathak 1990) and traveled to the west.

This is not an isolated instance. It is interesting to note the common epithet *Śarva* shared by Rudra and Śiva. According to S.Br. 1.7.3.8, Agni is called *Śarva* by the Easterners (*Śarva iti prācyā ācakṣate*). Incidently Avestan Vendidad Fargard XIX.4 also refers to deity *Śaurva* identified with Asura. In the Indian tradition the God Śiva was worshipped by *asuras*, *dānavas* and *daityas*. There is a western counterpart of the Paśupati Śiva in the Celtic mythology. It is the deity Cernunnos. The transformation of the Central theme of the Lord of Beasts i.e. Paśupati appears to be:

Śarva ——→ *Śaurva* ——→ Cernunnos

Vedic Avestan Celtic

Similar is the case with the Biblical word Jehovah. It is traced back to its Chaldean origin Yahave and Avestan Yazu.

The word *yahvaḥ* appears in RV. eight times depicting greatness of the associated deities namely Agni (RV 3.1.12), Indra (RV. 8.13.24) and Soma (RV. 9.75.1). According to the etymology in *Nir.* 8.8 "*yahva iti mahato nāmadheyam*". It is also used as vocative for Agni. - 'O Yahva' you are the sacrificer of the gods, (RV. 10.110.3). Thus the transformation appears to be:

Yahva ——→ Yazu ——→ Yahve ——→ Jehovah

Vedic Avestan Chaldean Biblical

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Pictotorial Representation of the Dragon Myth

There are several artifacts and seals depicting the dragon myth. I propose that these scenes can be better understood in the context of the Vṛtra myth in the *Ṛgvedic* lore. The tradition of making seals disappeared from the Indian scene in the post-Vedic period. Even during the Indus Culture period, out of nearly 2500 seals and sealings excavated so far, only one seal from Lothal can be identified as Dragon Myth seal, Fig. 8 (Joshi and Parpola 1987:268 L-123). It is a circular seal and mostly from the Middle Eastern region. In this seal, goats in attacking position flank the central dragon. I have interpreted this seal as dragon Vṛtra flanked by dual deities Indra-Agni (RV. 8.40.8) or Indra-Viṣṇu (RV. 8.100.12).

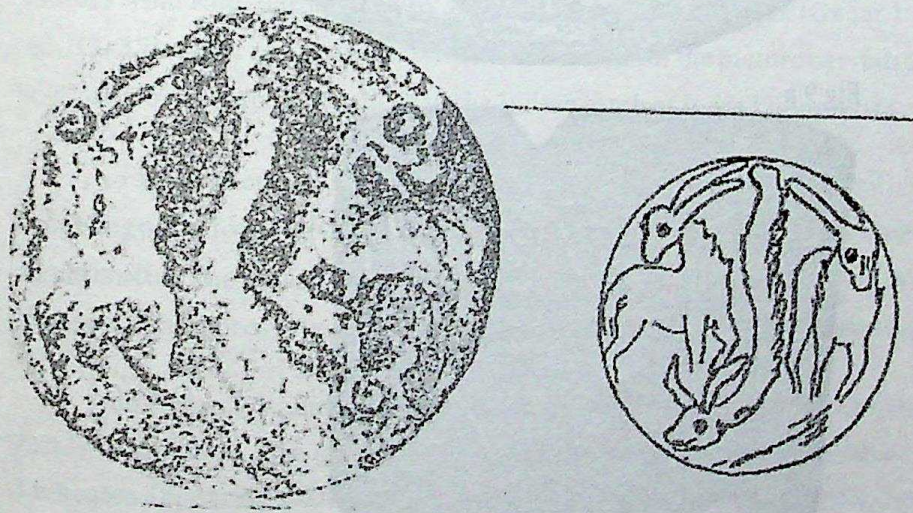

Fig 8 Circular Seal from Lothal and its line sketch
(Reproduced from Rao S. R. 1985)

Vṛtra myth on the Khafajeh bowl

A dark grey steatite bowl from ancient Mesopotamia is reported by Mallowan. It was found at Khafajeh and is often referred as Khafajeh bowl (Fig. 9 a and b). Mallowan describes the Bowl:

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Fig 9 a

Two views of Khafajeh bowl depicting dragon killing

Fig 9 a and b Two views of Khafajeh bowl
(Reproduced from Mallowan 1965:22-23)

"Good evidence of contact between ancient Mesopotamia and India via Iran provided by this dark grey steatite bowl. Indian influence may be clearly discerned in the intricate scene, which is carved in relief. A typically Indian bull is shown with it's hump back, and a curious male figure with long hair and wearing a kilt grasps two sinuous objects, representing running water, which flows in a continuous stream. Further round the bowl another similar

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male figure stands between two lionesses with their heads turned back towards him. He grasps a serpent in each hand. A further scene, not shown, represents a prostrate bull, which is being attacked by a vulture and a lion. The combination of water, bulls, snakes and vegetation in the design possibly indicates a rain making ritual.

The standing bull is reminiscent of the principal motif on a number of Indian seals. The stone used, steatite, is familiar in Baluchistan and a number of vessels from the Royal Cemetery at Ur were fashioned from this material. This bowl dates from C 2700 – 2500 BC and the motif shown on it resembles that on a fragment of a green stone vase from one of the Sin Temples at Tell Asmar of much the same date." (Mallowan 1965: 22-23).

As pointed out by Mallowan the humped bull is typically Indian. It appears on the pottery from Kulli dating back to 2800 BC and from Mundigak (Gajjar 1971: 9 & Figs. 30, 31, 33, 35). After noting the possible Indian origin of the picture carved in relief on the vase it is now possible to relate these to the Indian myth of Indra killing Vṛtra.

Fig. 9a, depicts Indra as holding two sinuous objects representing running waters. Indra dug paths for the rivers by killing Vṛtra. Indra was assisted by Soma while killing Vṛtra. Soma is often known as a bull, with sharp horns (RV 9.15.4; 10.86.15). The serpent on the extreme right represents *Ahi* attacking Soma in the form of the humped bull.

In figure 9 b, Indra is shown standing between two fierce serpents holding them firmly to kill them. The snakes are *Ahi*, the limbless serpent demons attacking Lord Indra. Lionesses appearing seals are the sacred animals often depicted on the Near Eastern seals.

The present author differs with Mallowan on the interpretation of the scenes on the bowl. They do not represent the phenomenon of rainmaking. Scholars have pointed out that slaying of Vṛtra does not tantamount to rain-making by Indra. Nowhere in the Rigvedic text are rains associated with the act of slaying Vṛtra (Macdonell 1981 : 59). The waters of the rivers flowed downstream along with the well-laid paths (RV. 1.32.8; 2.15.3; etc.). The sinuous objects represent the released river waters along those paths.

The various aspects of the Vṛtra myth are represented on the bowl. Thus the Indian myth of Indra-Vṛtra conflict traveled to the region of Ur in the times dating back to 2700-2500 BC.

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Dragon Killing Seals

Beatrice Teissier's (1984) Marcopoli collection of seals gives a wide range of collection with numerous legends engraved on these seals. These seals date back from the Late Uruk and Jamdat Nasr periods (3200 BC) to as late as the Achaemenid period (400 BC). Two of these seals namely No. 224 and 231 are discussed in the following paragraphs. These can be better understood in the light of the Vṛtra myth.

Seal No. 224

The Dragon killing seal No. 224 (Teissier 1984: 169) Fig. 11 is made out of Serpentine material. It has Circumference of 31 mm and 12 mm height. It is dated around 900-800 BC and belongs to the Neo-Assyrian Neo-Babylonian period. Teissier describes the seal:

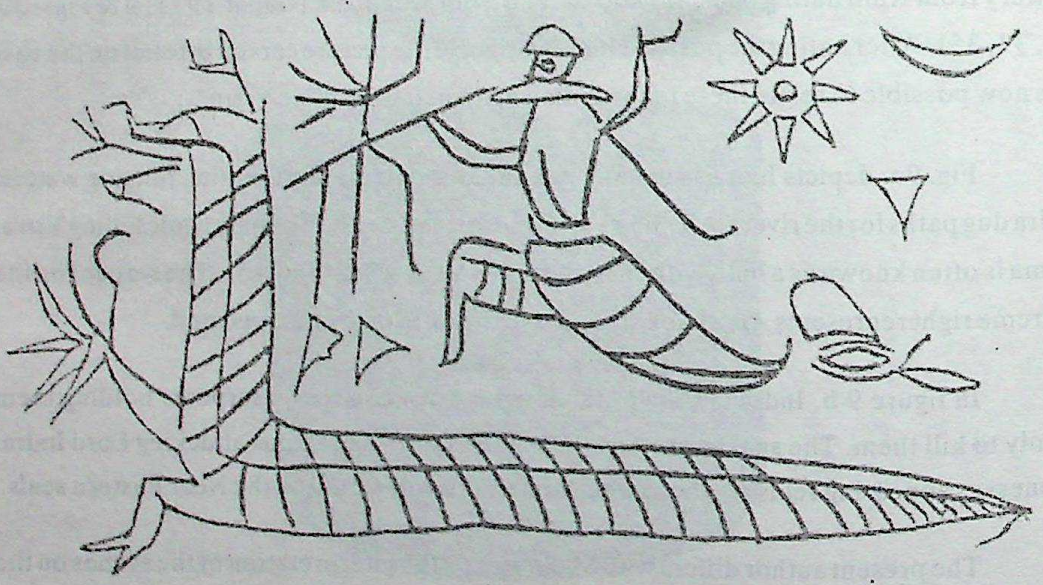

Fig. 10 Deity holding multipronged weapon and running over a dragon
(Reproduced from *Ancient Near Eastern Cylinder Seals* by Beatrice Teissier (1984) University of Calif. Berkley USA P 169)

"The scene on seal 224 is reminiscent of an Assyrian relief that depicts a winged deity armed with lightening forks and swords attacking a monster. The lightening forks held by the figure on the relief and on the seals such as this one suggest a connection with the

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weather god if not an actual representation. A number of linear style seals depict this subject with figures sometimes armed in the manner of Adad" (Teissier 1984: 38).

The dragon on the seal is shown with raised head, serpent tail and serpent scales all over his body. There are symbols of the Sun and the crescent in the upper right corner of the seal.

In light of the Vṛtra Myth, the deity holding the fork is Indra who wielded *Vajra* (RV. 1.62.12), the weapon specially fabricated by the artisans of Gods Tvaṣṭṛ for him (RV. 1.32.2).

The *Vajra* fabricated for Indra was four angled (RV. 4.22.2) and sharp (RV. 7.18.18). Indra whets it like a knife. The bolt wielded by Indra is compared with the Sun, in the sky (RV. 8.59.2).

The symbol of Sun and crescent can be understood based on the description that Indra was the generator of the Sun (RV 3.49.4) and placed the brilliant light, the Sun, in the sky (RV. 8.12.10). Indra on killing Vṛtra made the Sun to shine (RV. 8.36.6).

The dragon on the seal is Ahi–Vala, an encircling demon with long stretching body. It is shown with small limbs to be appropriately called as limbless demon (RV. 1.32.7; 1.52.4), who lay sluggishly on the ground (RV. 1.121.11).

Thus the seal is a pictorial depiction of the Indra-Vṛtra conflict.

There are two more seals (a) Fig. 11 in Parker (1965; Seal No.55 PL XVI) and (b) Fig.12 (CANEC seal No.688) depicting the dragon myth.

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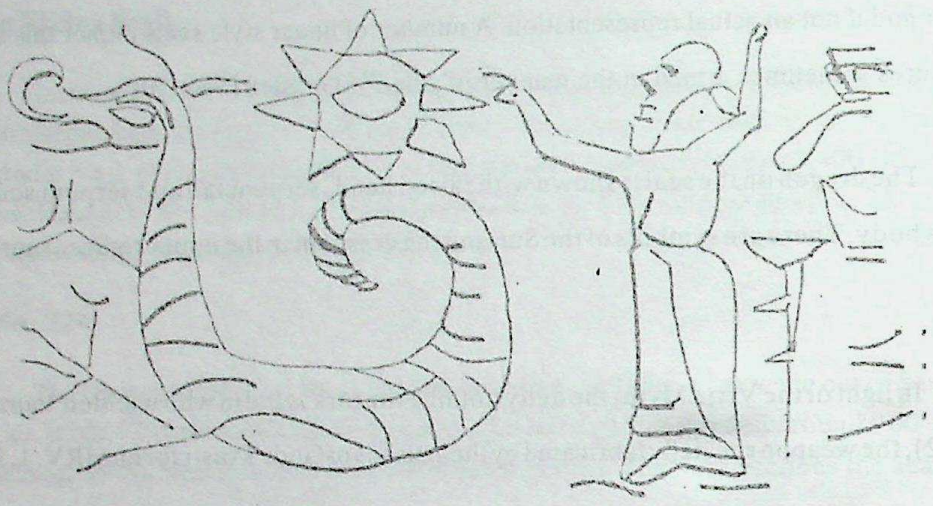

Fig. 11 Seal from Tell Al-Rimah depicting dragon killing scene
(Reproduced from Parker (1965) *Iraq*, Vol. 37 Pl XVI, Seal No. 55)

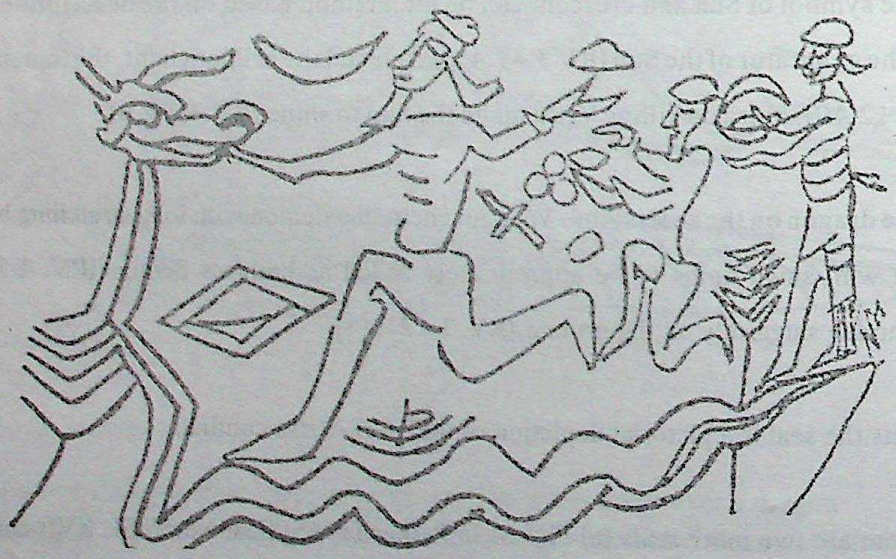

Fig. 12 Dragon Killing Deity on Neo-Assyrian type cykindrical seal
(Reproduced from Paroda E. (1984) Seal No 688)

These also can be better understood as depiction of the Vṛtra myth.

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Weather God Fights with the Serpent

The Hittite relief form Malatya (Hittite Museum, Ankara), shows two gods, wearing the high horned tiara and armed with spears, swords and clubs. One on the right engages the serpent dragon (Fig. 13). The Hittite weather god is counterpart of the English god Thunor. He battles with the serpent Illuyankas.

According to Branston 'The problem now is to decide a little more exactly what the Old English believed about Thunor, for it is certain that many folk tales not originally connected with the god were elevated to the status of myth and attached to the name of Thunor or Thor in Scandenvia and Iceland. Since Thunor made his name first among the Saxons and since his earliest attributes are those of a storm or weather god, a strong god, a patron of agriculture, we can be sure that the Saxons of Essex, Succex and Wessex worked upon him in this light. Thunor's personal appearance was developed very early; there is no mistaking the similarity in complexion beardedness and build of the Hindu, Hittite and Norse weather gods, and we are therefore, right to assume that the Saxons in England thought him as a red-whiskered giant who carried a hammer capable of dealing with all his and their enemies, and their work-a-day foes were famine caused through crop failure, cattle-plague and pestilence. Thunor's connection with farming make for a fertility element in his cult.' (Branston 1974: 116-117)

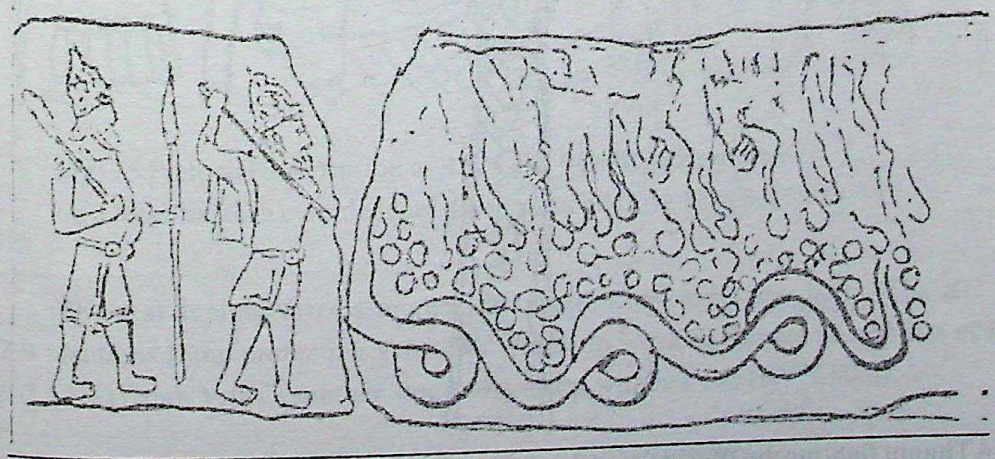

Fig. 13 Hittite weather God fights with serpent
Reproduced from Branstone (1974) *Lost Gods of England* P 117)

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The Rigvedic lore also describes Indra's person and character. "He is said to be golden in colour (RV. I.7.2, VIII.66.3). His body is gigantic; his neck mighty and his back brawny. His arms are sleek, and his hand thick and firm –both right and left - being particularly well shaped (RV. I.102.6; IV.21.9 etc.); he has handsome chicks (or lips) and is, therefore, often called *Sušipra* (RV 2.12.6), *Śiprin* (RV. 1.29.2; 3.36.10) or *Śipravān* (RV. 6.17.2). He is Twany haired (10.96.58) and tawny bearded (10.23.4)" (Dandekar 1979: 160).

I have shown elsewhere that Indra was not a war god but associated with agricultural operations (Pathak 1993b: 13-19). Thus association of Indra with dragon killing and agriculture dates back to the Vedic period in pre-Hittite times. In the relief above the two god-like figures therefore, can be seen as dual deities Indra-Agni, Indra-Soma etc. slaying the dragon (cf. section 8).

The myth of Thunor fighting the world serpent was current among Saxons in England as late as AD 900. In the famous Gosforth Cross, Cumberland shows the picture of Thunor fighting the World Serpent, a virtual depiction of The Malaya relief (Fig. 14) discussed above. It is – Ahi Vṛtra - the serpent monster Vedic literature.

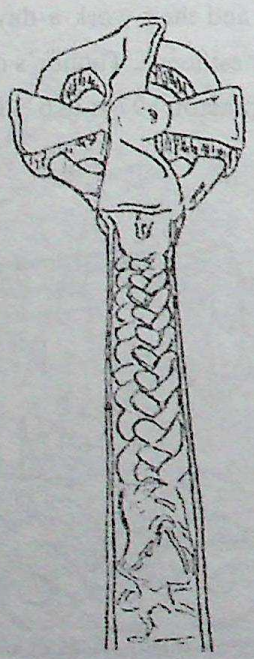

Fig. 14 Thunor fighting the World Serpent, scene from the lower part of the Gosforth Cross. (Reproduced from Branstone (1974: 118)

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Vṛtra – Danu Seal

Seal No. 231 (P. 171; enlarged photograph on p. 320, Fig. 15) reported by Teissier, can be better understood in context of the Rigvedic hymn 1.32. The seal material is serpentine and measures 30 mm circumference and 14 mm height. It is dated 900-700 BC and belongs to the Neo-Assyrian and New Babylonian period. Teissier gives the following description of the seal:

"A figure lies on the bed inside a semicircular structure. A bearded figure leans over the patient with an instruments and a female figure kneels at the end of the bed with a flaming bowl. Outside the structure a female figure dances on the right and on the left a figure stands holding a staff. A dog walks on the roof of the structure. Sky, star, crescent, winged Sun disc." (Teissier 1984: 170).

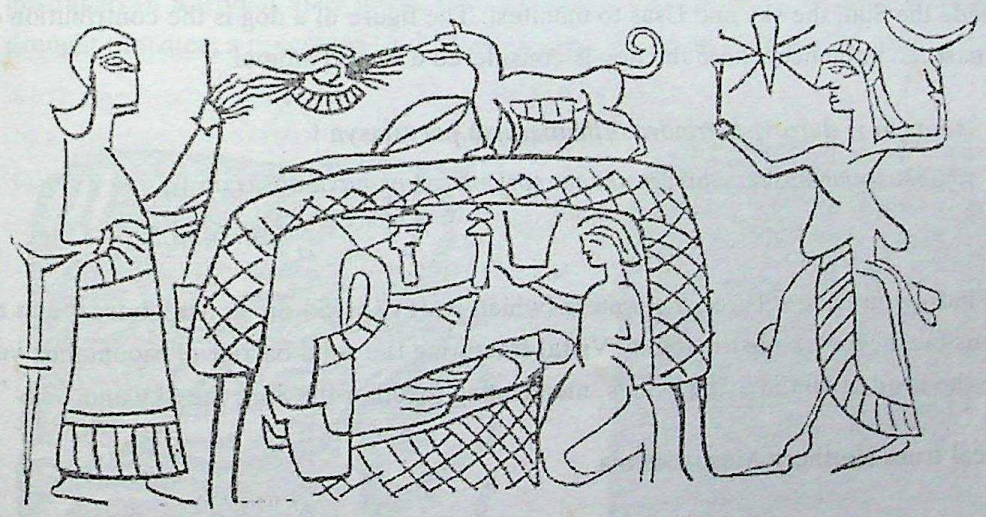

Fig. 15 Pictorial description of RV. 1.32.9 Dānu saving Vṛtra on a Near Eastern cylinder seal. (Reproduced from Tessier (1984:77)

The seal depicts Vṛtra's mother *Dānu* protecting him from Indra. The *ṚC* RV. 1.32.9 mentions Dānu protecting Vṛtra. RV. refers to Vṛtra as Dānum i.e. the son of Dānu (RV. 2.12.11) and Vṛtra's mother stood firm along with her son (RV 3.30.8).

nīcāvayā abhavadvṛtraputrendro asyā ava vadharjabhāra |
uttarā sūradharaḥ putra āsittdānuḥ śaye sahavatsā na dhenuḥ ||
(RV. 1.32.9)

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Tr: "As the strength of Vṛtra's mother declined, Indra threw his weapon on her. The mother lay above and the son lay below (covered by her). Danu lay (on the ground) like a cow with her calf alongside."

The human figure lying on the ground is Vṛtra. The female holding bowl, in whose lap Vṛtra is lying, is his mother Dānu. She is trying to protect her son from the attacking Indra who is shown in the left corner as the leaning male figure holding an instrument. The instrument as we know is *Vajra*. The so-called semicircular reed hut represents the limbless dragon i.e. an earthen bund. The description of the semicircular shape as an earthen bund is more appropriate than the one suggested by Tiessier as reed hut. It represents Vala the encircling nature of Vṛtra. Outside the semicircular shape on the left, the male figure could be a deity aiding Indra in his endeavour of killing Vṛtra i.e. say Soma (RV. 9.61.22) or Agni (RV. 8.7.27). On the right out side the cover is a female figure of Uṣas, the dawn goddess. Indra made the Sun, the sky and Uṣas to manifest. The figure of a dog is the contribution of the Zoroastrian influence where the dog is considered a sacred animal.

tvamapo vi duro viṣūcīrindra dṛḷhamarujaḥ parvatasya ।
rājābhavo jagataścarṣaḥīnām sākam sūryam janayandyāmuṣāsam ॥

RV. 6.30.5.

TR: 'O Indra you have set free the waters (which were) spread on a vast landscape in all directions (as they were obstructed by Vṛtra) fracturing the solid barrier of mountains; you became the Lord of all the living beings, manifesting together the Sun, the Sky and *Uṣas*.'

Dānu seal from Northern Mesopotamia

Dr. Elie Borowaski's collection of the seals has a similar seal with upper and lower scenes (Muscarella 1981: 86 Fig. 12). While the upper half of the seal depicts the typical enthroned king and the court scene, the lower register shows that beneath a reed hut lies a recumbent male figure on a bed. A person holding a small dagger-like weapon behind him stands beardless, therefore, a female figure. The scene is very similar to the Vṛtra-Dānu seal described above.

Danu myth is present in the Celtic mythology also. She is Mother Goddess and the Gods are referred to as the 'Children of Dānu'. This concurs with the transformation of demons in ancient Indian texts into Gods in Iranian texts and gods of Indian pantheon into demons in Indo-Iranian texts. It is to be noted here that the name Dānu being so simple, it

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traveled to the distant lands in Northern Ireland. The current name Diana, which is the name of either a Roman goddess or moon personified does not explain the Danu being the mother of gods. So the Celtic name Danu should be traced back to Rigvedic name Dānu.

There are a few seals found in the parts north of Afghanistan which depict the Snake-man Azi Dahak of the Avestan texts. These seals are being traced to Bactria. Two of these are reported by G. Azarpay who states these semi-human figures are snake-man's portraits. These are described below:

"The Bronze Age culture of Central Asia has been the subject of numerous recent publications that largely treat discoveries of the Soviet Afghan archaeological expeditions of the 1970s and clandestine finds in the south Bactrian plain, near Balkh and Mazar-I Sharif, in north-western Afghanistan. Among the latter are two sealstones, decorated with extraordinary portrayals of a frontal male image that are tentatively interpreted here as a reference to a drought monster, a precursor to the Indo-Iranian Azi Dahaka (figs. 16 a, b)."

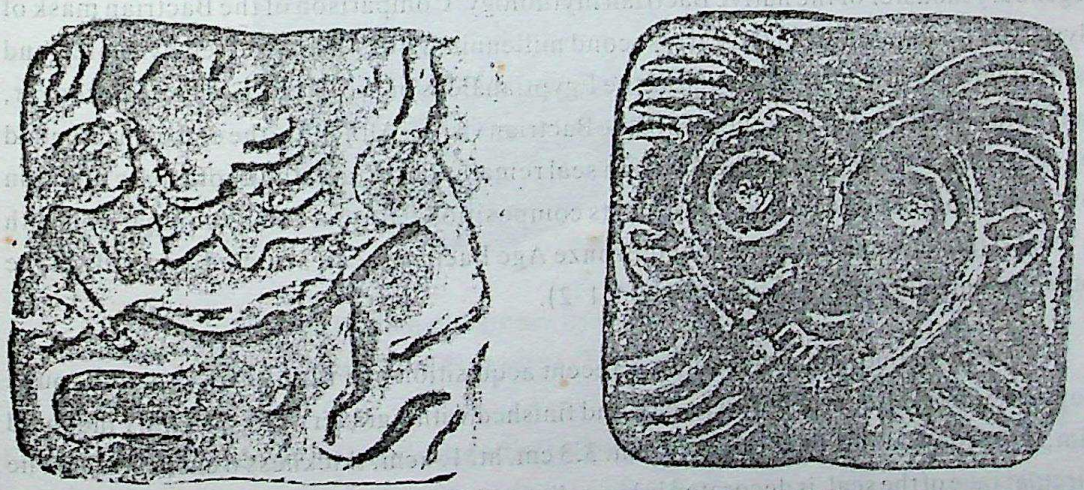

Fig. 16 a and b Snake man sealstones from Bactria

(Reproduced from G. Azerpay (1991) P 2)

This interpretation is based on formal and substantive considerations, cited below, and on the assumption prevalence in proto historic times, as in the subsequent historic age, of the belief in the concept of supernatural control over water, which was a precious resource, in the oasis civilization that flourished in the now semi-desert steppe of northern Afghanistan.

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One of the seals under study, a black chlorite rectangular plaque (3.7 X 3.7 X 1.0 cm), with lenticular section and a string hole drilled through its longitudinal axis, was obtained on the art market, and is now housed in the collection of the *Musee du Louvre*, in Paris (AO 26254).

A frontal human head decorates one face (fig. 1, right) of this two-sided seal, which bears, on its second face, the profile image of a winged feline with serpents in the field (Fig. 16 a , left, sealing). The seal's typology and schematic design, represented by sharp, linear outlines and flat relief, have led Pierre Amiet and Viktor Sarianidi to identify it with a Bactrian Glyptic tradition, classified as "Murghab Style," known from excavated examples of seals from Bronze Age sites in southern Turkmenistan and northwestern Afghanistan (see below).

The frontal human mask on the Louvre seal, portrays a male head with large concentric circles for eyes, flared nostrils and puffed cheeks set in a round face. The aureole of mops of sleek hair and whiskers, swept toward each rounded ear, is another startling attribute of this unique image in which Sarianidi sees an eloquent expression of a legendary monster of the native Bactrian mythology. Comparison of the Bactrian mask of Syro-Mesopotamian art of the early second millennium BCE, as suggested by Amiet, and with other apotropaic masks, such as the Egyptian Bees or the Greek Gorgon, moreover, serves to underscore the uniqueness of the Bactrian vision. Although, the emotion intended by the grimace of the face on the Bactrian seal remains uncertain, the apotropaic function of the awesome visage is ascertained in its compositional format and by comparison with a frontal image depicted on a second Bronze Age Bactrian seal, selected for study in the present seal under paper (Azarpay 1991:1-2).

The second seal under study, a recent acquisition by Frank L. Kovacs, is a round copper-bronze disc, probably wax cast and finished with a graver, with a slightly indented rim, and a loop handle on the back (diam. 3.3 cm. ht. 1.4 cm, thickness 6 cm (fig. 17). The circular face of the seal, is decorated in low relief with the image of a naked man in a kneeling position, with a relatively large frontal head and torso, and the lower body depicted in left profile. The image is provided with extraordinary attributes, represented by a pair of horizontal horns placed behind the ears, wings on the shoulders, and arms that curl up and terminated in the heads of a pair of open-jawed serpents. A third serpent, coiled around the waist of the figure, unfurls to the right of the composition." (Azarpay 1991: 1-2)

He further states that these seals can be dated around 2100–1800 BCE Late Bronze Age (Gonur phase). "Seen in the context of the subsequent religious notions of the Iranian

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world, the snake man fusion in the figure on the Kovacs seal (Fig. 17) conjures up a vivid image of the Zoroastrian concept of Azi Dahāka, whose full name is explained as "snake-man" or "hominoid serpent". As a creation of evil and antagonist of the true Mazdayasnian religion, the Avestan Azi Dahāka is believed to have been derived from an earlier Indo-Iranian drought monster responsible for restraining heavenly waters." (Azarpay 1991: 6).

Ancient Bactria had close contact with the Indus Culture and the Vedic imageries were part of the cultural ethos there. As can be seen from the Rigvedic accounts, Vṛtra was called Ahi-Dāsa and in the post Vedic *Brāhmaṇa* accounts, he was virtually turned into a snake man in the Bactrian culture. The same myth travelled to the west and north and fusion of human appearance with snake, got inscribed on the seals in fig. 17 below.

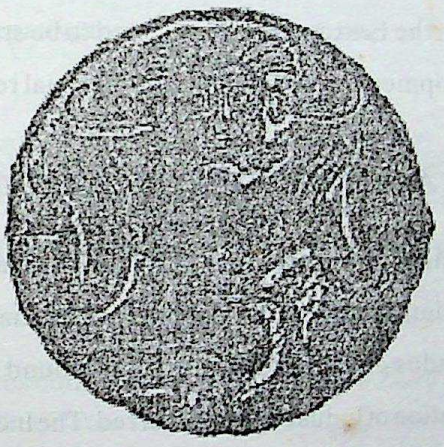

Fig 17 Snake man sealstones from Bactria
(Reproduced from G. Azerpay (1991) P 6)

From the above discussions we can draw the following conclusions:

1. The dragon myth was widespread both in the East and Near East.

2. The Indra-Vṛtra conflict in the *Ṛgveda* can satisfactorily explain the various aspects of the origin and development of the dragon myth in the west. Serpent monster - Vṛtra was the dragon, slain by the deity.

3. Some of the vase engravings and seals found in the Near Eastern region and from Bactria, can be better understood in light of the Indra-Vṛtra war.

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4. There were obvious influences of the then existing cultures of the late period on the seal engraving i.e. figures of lion, dog, winged sundisc etc.

5. While the dragon myth remained in wide circulation in the near East, it was transformed into ritualistic performances and as living tradition in some parts of the Himalayan region. Though contemporary of the Indus culture, there is only one Indus seal from Lothal, depicting the dragon myth. That too can be traced to Near Eastern region.

6. It continued to influence the European cultures in Greece and northern Europe even after Christinity was adopted as main religion by the masses.

The dragon myths, both in the East and the West, need to be studied in more depth for exploring inter-relation, development of the myth and its pictorial representation.

14. MIGRATION TO THE EAST AND WEST IN POST-INDUS TIMES

As shown in the section on the Indus seals, many of the Indus seals are interpreted as pictorial representations of the Vedic hymns, i.e. the Vedic lore. Especially the Atharvavedic lore was contemporary with the Indus culture period i.e. from around 3000 BCE to -1900 BCE. Around 1900 BCE, the devolution of Indus culture occurred. The Indus and neighbouring river valley region was beset with tectonic upheavals of unprecedented scale. Break occurred in the Vedic tradition at this point. The people of the Vedic society scattered. I propose that people undertook mass migration as they developed schism on the religious lines. A group attributed the misfortunes to polytheism. It migrated westward and went right up to Iran, stopping over several locations to be defiled by evil spirit Angra Mainyu. It was the Indo-Iranian society. Other group which struck to the old traditions and further elaborated the sacrificial rituals, migrated eastwards. We find new lands up to Magadha and Vidarbha in south being mentioned in the *Brāhmaṇa* texts. In a recent publication, doyen of Indian archaeology, Late Prof. B. B. Lal wrote: "Content–wise, the Avestan religion reflects a kind of dissent from that of the *Ṛgveda*. The concepts of *devas* and *asuras* get reversed. Nevertheless there is genetic relationship between the two. All this shows that Avestan people are closely

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related to the Rigvedic people – a situation, which can only be explained by some of the Rigvedic people moving to the land of the *Avesta*. There are many pieces of evidence in the *Avesta* itself which testify to this." (Lal 2009: 2)

I also wish to bring to the notice of the readers that in the older traditions; Vedic gods like Indra, Varuṇa were given epithet of Asura. I find *Atharva Veda* lore, closer to the Zend Avestan lore and it points to common heritage of both texts for the following reasons:

1. *Asura* which becomes *Ahura* in the *Zend Avesta* text is frequently mentioned with positive tone. (RV 1.10, 6.86.3, 6.100.3, 6.108.3, 18.1.2, 19.56.1-2, 20.32.1, 20.91.2).
2. *Asura* appears in negative tone also in several other hymns, (AV. 2.3.2, 2.27.3, 4.19.4, 4.23.5 etc)
3. Gods and *Asuras* related to each other through medical item – soil of the white ants.
4. Prophet Zoroaster calls himself Athravaṇa, i.e. follower of Atharva Veda or Vedic magical hymns.
5. Almost all the deities common to Vedic texts and *Zend Avesta* occur in AV text.
6. The Indra-Vṛtra conflict in its detailed form is missing in the *Zend Avesta* as well as AV lore.
7. Some of the Vedic entities like Indra, Manyu etc. turn into hostile beings in the *Zenda Avesta* tradition. Among them, Aṅgra manyu is an arch-enemy of the great God Ahura Mazda. Angra manyu occurs as Manyu in AV. text in many hymns (AV 4.31, (Also RV 10.84), 4.32 (RV. 10.83), 7.93, 9.2.23, 10.5.48, 11.8.1).

Since the time of Yāska in the RV and AV lore, Manyu is anger personified. In AV. 4.32 he is described as helping to conquer both *Ārya* and *Dāsa*. I have earlier identified *Dāsa* people who resided in the southwestern parts of Afghanistan. Pair of Ārya-Dāsa appears together with the mention of slaying of Vṛtra.

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These lead us to conclude that Manyu was worshipped before the followers of *Ahura* Mazda, separated from the followers of the Vedic gods and incidence of slaying of Vṛtra had occurred before their separation.

The westward migration of followers of Ahura Mazda, are attested in Vendidad, where Aŋgra Mainyu is depicted as an evil spirit. Out of sixteen lands created by Ahura Mazda, as mentioned in the first-Fargard of Vendidat, seven lands are located close to the Indus culture region. These are Bākhdhi (Balkh), Haroyu (Herat), Vaekereta and Urva (around Kabul), Harahvaiti (Sarasvati), Haetumant (Helmand) and Hapta Hendu (Sapta Sindhu-Punjab). It indicated that before migrating to northern part of Iran bordering Azarbaizan - *Arya bīja*, the migrating folks spent considerable time in these seven lands.

As Lal points out from the statement in the text of *Baudhāyanaśrautasūtra* 18.44 one son of Aila Purūravas and Urvaśī named *Āyu*, migrated eastwards while other *Amāvasu* migrated westwards. The former, moving eastwards, gave rise to the Kuru-Panchala and Kashi Videha dynasties, while the later moving out to the west, went over to Gandhara, Parsu and Aratta. This bifurcation evidently took place in an area, which was between the Kuru region on the east and the Gandhara region on the west. In other words, the scene of partition lay somewhere in Punjab (Lal 2009:4).

Although from the sequence given in the original Avestan text, it is not possible to trace the path of migration; their movement in seven lands close to the Indus valley region and the Indus valley itself points to their path originating from the Indus valley, the mainstay of the Indus Culture. They carried the textual and cultural heritage as they moved westward. It underwent changes as the time passed. In the post-Vedic period in India too, the status of Indra as the Supreme God was lowered. Other Gods came to prominence. Same pattern occurred in the Iranian pantheon of Gods. Indra was deprived of his greatest feat. Then there appeared angel Verethrugna in the Yastas, now known as Beharam, undergoing the following transformation:

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Vrtraghna ——→ Verethragna ——→ Beharam

Verthraghna enjoys status of being angel and draws his strength with the blessings from Ahura (*Beharam yasta Karda* 1).

15. LIVING TRADITION OF VṚTRA KILLING

People of the western and northwestern Himalaya, still celebrate the tradition of Vṛtra killing as an annual fete. In his informative article, P.C. Kashyap (1997:85-93) has given details of the enactment of the saga of Vṛtra killing for three days starting from new-moon day of *Mārgaśīrṣa* (Nov./Dec). The festival is named as "*buddhi diyaundī*" which in common parlance, means a violent clash. It is also known as "*Vṛtrāsura melā*". It is celebrated as a war game played between two groups led by Vṛtra and Indra followers. Vṛtra is made up of a dragon shaped torch from easily inflammable material like pine wood and splinters. It is taken round in villages, soliciting support for the *Asura, Dānava*, the names that occur for Vṛtra in the RV text. Then the mock war is enacted and agile "Indra" actor manages to jump on the dragon, rains blows on its head and pulls out pine splinters. He lacerates its body and breaks jaws. As Kashyap describes, "This portayal of the Indra-Vṛtra combat mirrors fight described in the *Ṛgveda* for release of the water, wherein Indra breaks Vṛtra's jaws into pieces (RV. 10.152.3), maim him and scatters his limbs (RV. 1.33.7-8)". The next celebration is making of a long snake like rope. While the participants in the *Deva* camp call it *Asura*, for the Vṛtra camp people it is *Nāga Devatā*. On its way to the war site, the rope is dipped for some time in local river or pond water. This is to signify control of Vṛtra over waters. During the ceremony, two Garhiya warriors are served special fermented liquor made of honey. One of these warriors then cuts the long rope and the rope cut into pieces, is drowned in river water. As Kashyap points out, the *Buddhi Diyaundī melā* is primarily held in the watershed region of the two rivers namely Sutlej and Bias. These are mentioned in connection with Vṛtra killing (RV. 3.33) (Kashyap 1997:86).

This lends support to the Rigvedic description of Vṛtra episode having occurred in the Indus valley region.

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2. Identity of Indra:

Bestower of lands and the Lord of Agriculture

Meaning of *Gauḥ* in RV. with reference to *Vṛtra*'s killing

RV refers to conquest of *Gauḥ* in connection with Indra's conquest over Vṛtra. Starting with Yāska, Sāyaṇa and the modern scholars too have taken meaning of *Gauḥ* as cows and sunrays. Some scholars like Macdonell, interpreted it as waters (Macdonell 1981:59). However these interpretations do not match with the situation and are not convincing. The present author proposes meaning of *Gauḥ* to be land segments. As a matter of fact, *Nig.* 1.11, lists *Gauḥ* in the glossary of synonyms for the earth. In the Puranic tradition also, many times the earth is depicted as a cow. On this background, meaning of *Gauḥ* as land segments submerged under water, held back by Vṛtra gives clear and convincing meaning of the *Ṛc.*

gavāmapa vrajam vṛdhi । (RV. 1.10.7b)

Tr: (O Indra) clear the (submerged) land segments.

tvam valasya gomato pāvaradrivo bilam । (RV. 1.11.5a)

Tr: "(O Indra) You have opened the hiding place of Vala full of (submerged) lands."

gāḥ ajayaḥ (RV. 1.32. 12b) Tr: (Indra) "won submerged lands"

yo gāḥ udājādapa (RV. 2.14.3a)

Tr: "(on slaying Vala) who released (submerged) lands and water."

gāḥ adediṣṭa (RV. 2.31.21a) Tr: "bestow (us) with lands."

Indrā dṛḷhaṁcidarujo gavyamurvam (RV. 3.32.16 b)

Tr: " O Indra! You have shattered the firm (mountain like demon) hiding the far stretching lands."

As given in SED-VSA, *gavyam* is a measure of distance equal to two *krośa*. In that case it can be derived from *go* to mean measure of land. It further confirms meaning of *go* to be land.

vrajamapavartāsigonām (RV 4.20.8)

vrajaḥ – multitude, collection (SED-VSA) – chunks (P)

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Tr: "You release the chunks (*vrajam*) of lands."

tān vrajān gomatā apāvṛdhi (RV. 4.31.13a)

Tr: " clear those chunks of land (segments encompassed by Vṛtra)

manuṣe gāḥ avindadahannahim (RV. 5.29.3b)

Tr: "Slaying (the limbless demon) *Ahi* (Indra) bestowed lands on the human beings."

This *Ṛc* refers to *Ahi* captivating *Gāḥ*. How can a limbless demon keep animals captive? The meaning of *Ṛc* becomes clear if *Gāḥ* is taken as land segments.

aśmānam cichhavasā didyuto vi dido gavāmūrvamustriyāṇām ।
(RV. 5.30.4b)

Tr: "On shattering of rocks (mountains) You (Indra) acquired lot of land."

tarda ūrva gavyam mahi (RV. 6.17.1)

Tr: "Revealed a large chunks of land (on killing Vṛtra)."

yasya gā antaraśmano made dṛḷhā avāsṛjaḥ । (RV. 6.43.3 a)

Tr: "Whose (Indra's) vigour released the lands firmly held within the rock (mountains)."

As can be seen from the *Ṛc*s quoted above, taking *Go, Gāh* as lands, *Gavyam* as a measure of land renders the meaning of these *Ṛc*s cogent.

Indra : God of lands and agriculture

Indra is the chief deity and the Supreme God of the Vedic pantheon of Gods. He is born after many Vedic Gods, but, achieved the Supreme status on account of achieving great feat of killing Vṛtra.

Since the ancient times, Indra's nature was debated. In ancient treatise on the Vedic deities, Yāska's *Nirukta* (*Nir.* 7.5) divided Vedic Gods belonging to three regions namely *pṛthivīsthīna*- terrestrial, *antarikṣasthāna* – aerial or intermediate region and *dyusthāna*- celestial. Yāska treated Indra, as the God of the intermediate region. Yāska gives ten derivations

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for the word Indra, signifying the role of Indra (*Nir.* 10.8). Dandekar has pointed out Indra's human traits and mannerisms and states that these, "must necessarily be distinguished from the very general human trait attributed to a God as the result of the normal anthropomorphic tendencies" (Dandekar 1979 141-198). According to Holey, who has written a treatise on the *Vedāṅga jyotiṣa* states that Indra represents the celestial point diametrically opposite to the sun. Indra is associated with the rainy season. (Holey 1991:1-14). Traditionally Indra was known as Rain God and in post Vedic times he was reduced in status against Kṛṣṇa, hero of *Mahābhārata.*

As seen earlier, although Indra killed Vṛtra and released waters, it did not rain. In the Rigvedic lore, he is not the Rain God. There is an independent Rain God Parjanya and he has the Indo-European counterpart in Fiorgynn. "The eastern branch of the North West Europeans had such a god called Fiorgynn whose name suggests that he was kith and kin to the Lithuanian Perkunas and ultimately to the Hindu God Parjanya" (Branston 1957:113). Indra's role has to be judged independently based on his accomplishments.

While killing Vṛtra Indra dugs channels measuring land (*mimāya*) with measuring aids (*mānaiḥ*); he opened floodgates (*khāni*) as if he was building a well-laid altar (*sadmeva*) (RV. 2.15.3).

The Seer Savya Aṅgīrasa praises Indra for making the land to grow tenfold *pṛthivī daśabhujirahāniviśvā tatananta* (RV. 1.52.11) to bestow on the human beings after measuring it – *pratimānam pṛthivyāḥ* (RV. 1.52.13). RV. 1.110.5 refers to measuring of land with rod – *kṣetramiva vi mamuḥ.* Indra was called as winner of land *urvarajit* (RV. 2.12.1) and *urvarāpatiḥ* (RV. 8.21.3). He was winner of war for land – *kṣetrasāta* - for his followers. Bringing more land under cultivation and measuring it for that purpose, was a very basic need of the human society. It is echoed in the RV. text.

I propose that the deity *Kṣetrapati*, the presiding deity of RV. 4. 57, is none else than Lord Indra Himself. The other deities *Śunāsīrau* and *Sītā* are also connected with agriculture. Indra was actually involved in ploughing of the agricultural field for making deep furrows – *Indraḥ sītām ni gṛṇhātu* (RV. 4.57.7). *Atharvaveda* also refers Indra holding ploughshare on the banks of river Sarasvatī and was called *sīrapatiḥ* (AV. 6.30.1).

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Cattle are needed for tilling the land. Indra waged wars to win cattle *gave cakarthorvarāsu yudhyan* (RV. 5.33.4), *gosātā* (RV. 10.38.1).

References in *Sūtra* literature

The *Sūtra* literature is of the later date. The various Sūtras deal with the ritualistic performances. In these Sūtras also Indra is associated with the annual sacrifices performed by agriculturists. The *Pāraskaragṛhyasūtra* (PGS 2.17.9) refers furrow sacrifice "*Sītāyajña*" and *Sītā* as Indra's wife. During the harvesting time while performing *Navaprāśana* ritual Indra is referred as Lord of Plough - *Indra Āsīt sīrapatiḥ*. The *Śrautasūtras* refer to an important festival – *śunāsīrīya* – which points to Indra's association with the agricultural activities (*Āpastambaśrautasūtra* 1. 20. 8.20, 3.18, 14.19).

On the identity of Indra

1. Indra was not the God only of thunderstorm or the Sun, as proposed by the earlier scholars.
2. He was known as the Lord of Lands *urvarāpatiḥ* even during the period of *Ṛgveda*. He was then associated with the agricultural operations till the *Sūtra* period.
3. He bestowed cultivable lands and animals on his followers; furrowed the agricultural fields and he fought wars to acquire lands.
4. No other God of the Vedic pantheon plays this role fully.

Thus we can conclude that in the Vedic period Indra was "Bestower of Lands and the Lord of Agriculture".

3. Misplaced Identity of Seer *Vasiṣṭha*

During these years when I was engaged in the Vedic and Indus Cultural studies, there were occasions of differing with other scholars and authorities. At times, I had to express my opinion through research papers and correspondence. My first notable difference of opinion occurred with Dr. Shubhangana Atre from Deccan College. She had expressed that the Paśupati seal from the Indus Culture as picture of a Virgin Goddess. I refuted the Virgin Goddess proposition in my article, published in *Purātattva*. I have interpreted the same seal as pictorial representation of the AV 2.34. It is given in details in the section on the Indus Culture.

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In the second instance, I had to express dfference of opinion with R.S. Sharma, historian, who authored a monograph "Looking for the Aryans" (Sharma 1995). I met Prof. Sharma during the World Archaeology Congress held at Delhi in 1994. Later on, I wrote him letters on his personal address. He too replied me back. I also wrote a letter to the publisher of the Journal *Pūrṇatrayī* who suggested me to write a reply. I countered Prof. Sharma's arguments concerning Aryans and the Horse (Pathak 1996 b:77-88).

My third and the last encounter was with Dr. Navaratna Rajaram on what was known as "Vasiṣtha's Head". It started with article by American scholars Hicks and Anderson, "Analysis of an Indo-European Vedic Aryan Head" in a reputed Journal, *Journal of Indo-European Studies* (Hicks and Anderson 1990: 425-446). The authors had purchased a life sized copper head with coiled hairstyle from a market in Delhi. They found some burnt carbon deposit in the corner, which they tested for radiocarbon dating. They found the corrected MASCA carbon 14, date centering around 3700 (± 800). Then they proposed, "More specifically the head can reasonably establish that the Vedic Aryans had reached the Indus Valley by 4000 BCE. If they had brought the metal with them, it would possible indicate they come by way of Anarak and Sialk in Mesopotomia where mines were in operation at that time had copper sulphite ores, similar to the material which composes the head" (Hicks and Anderson 1990: 426). Many held this article as path breaking finding since it contained results of testing of carbon which was dated and took the date of Vedas to the pre-Indus Culture times.

Fig. 18 Vasiṣtha's Head in Bronze
as proposed by Hicks and Anderson (1990)

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Navaratna Rajaram, who was with NASA, a person with high scientific background came out in support of the proposition of Hicks and Anderson. He also proposed that the origin of the pyramids could be traced to building of *citis* i.e. fire altars as described in the *Śrautasūtras* (Rajaram 1994: 1-11). There were other scholars namely Prof. Subhash Kak and David Frawley who too supported the proposition. In the *Yoga* Journal's issue of July / Aug 1992, Subhash Kak concurred with the views that the head was that of most celebrated Rigvedic seer Vasiṣṭha (Kak *et al* 1992: 67). When I saw, the picture of the head, I thought it to be of the recent times. It was copper mask, usually placed on *Śivaliṅga*. I did not have access to Hicks and Anderson's article. Later on P.V. Holey from Nagpur who had written an excellent treatise on the *Vedāṅga Jyotiṣa*, sent me a copy. I found many over statements in that article. What baffled me most, was the carbon dating. It was 3700 (±800).

The carbon - 14 dates too have time bracket with ±variations of the order of 90-250 years. I checked thousands of Radio Carbon dates from the Indus-culture and from Iran compiled in the volumes of "*Chronologies in Old world Archaeology*" Vol I & II (Ehrich 1992). Only when the time period extended beyond, say 33,000 BCE the variation was of the order of the order of ±3000 years. For the sample from Kachi in Baluchistan it was 33,000 + 3000. For most samples in the bracket of 5,000–6,000 BCE, it was within + 250. It clearly showed problematic measurement of the sample by Hicks and Anderson. Although it was claimed that the mask was subjected to extensive testing for estimating its period of casting, the authors had quoted only this flawed carbon–14 date. It convinced me that the mass was of recent origin and the claim of its being 5000 years old, was misplaced.

I contributed an article in the "*Quarterly Journal of Mythical Society*" (Pathak 1996:77-88), refuting claims of the authors, especially Dr. Rajaram. I differed with him on two counts. Rajaram had claimed that the *smaśānaciti* as described in the *Baudhāyanaśrauta sūtra* 8.1-14 and *Āpastamba Śrautasūtra* 13.85 were precursors of the Egyptian pyramids (Rajaram 1992:7). But in absence of corroborative archaeological and textual evidence, it was not possible to accept Rajaram's claim of "geometric and religious connection" between the India of the *Sūtra* period and ancient Egypt.

About Vasiṣṭha's head the carbon dating, the claim was dubious. It was clear that the authors Hicks and Anderson had inadequate background of the Vedic literature. There are many Gods and seers who sported long hairs and tufts. Secondly, there was no corroborative evidence of copper casting from the time bracket of 3700 + 800 years to believe that 30 cm long piece could be cast. RV. 7.33.1 refers to the group of Vasiṣṭhas who had plaits inclined towards right i.e. *dakṣiṇataskapardaḥ* and not one individual. It was not unique. There were

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other Rigvedic entities sporting long plaits namely Rudra (RV. 1.114.1), Pūṣan (RV. 6.55.2), Soma (RV. 9.67.11) and Trutsus (RV.7.83.8). All these are called *kapardins*. "So it is not justified to single out only an entity (like Vasiṣṭha). To me it is typical Śiva head with round bottom. It is traditionally used to cover a Śivaliṅga. The third point to be noted was the third eye on the forehead of the mask. It is always there on a Śivamukha as it is known. Such statues are common all over India. Unless there is parallel and corroborating evidence coming for Vasiṣṭha's head, it is better to keep one's fingers crossed" (Pathak, 1994a:86).

This article sent correct message to the Indologists and Archaeologist and we do not find the Vasiṣṭha's head ever quoted to support antiquity of the *Ṛgveda* to the pre- Indus period quoted everafter in the subsequent publications.

4. *Karambha* and Discuss of the Vedic God Pūṣan

The Rigvedic God Pūṣan was an important deity in the pantheon of the Vedic Gods. He was offered oblations in various types of sacrifices. Many scholars have explored various facets of Pūṣan's personality (Macdonell: 1898, Hillebrandt: 1929, Reddy: 1990, Atkins: 1941 and others). Pūṣan belonged to the earlier pantheon of the Vedic gods. In the Vedic text, he was associated with the other Vedic Gods, namely Aryaman, Bhaga who were common to the Vedic and Indo-Iranian pantheon. Some scholars have identified Pūṣan with the Sun God.

In the following text, five aspects of Pūṣan are dealt. These are, a) distinct identity of Pūṣan as a god of animal wealth and comparison with the Sun God, b) offering of puffed grain with curd called *karambha*, c) Pūṣan's discus (RV. VI.54.3) which is identified with discus used as a missile rather than wheel of a chariot, d) Pūṣan being deity belonging to the period of transition from huntergatherer stage to animal domestication stage and e) comparison of Pūṣan and Kṛṣṇa as gods of herdsmen. It is proposed that during the period of deity Pūṣan, society of the followers of Vedas, was about to enter the early food production stage as evident at Mehrgarh near Quetta in Baluchistan. In the following text, I have quoted translation of the Rigvedic verse by RTH Griffith (1992 reprint).

Pūṣan - not the Sun God

The human societies all over the world, conceived Sun as an important God from the beginning. The tribal societies all over the globe, who have continued to follow the life style, almost unchanged over ages as of recent past or of today, have worshipped the Sun God as

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a primary deity for obvious reasons. The same cultural ethos is to be found in the tribal societies in India. One of the most prominent tribal societies in India, the Mundas, worships Sing-bonga, the Sun God as the prime deity; all other gods being his manifestations (Hoffman 2001:11-12).

Although Pūṣan is sometimes considered as a Sun God, his role is fairly independent of the Sun. His identity is distinct from the Sun. He is messenger of the Sun God (*dūtyām sūryasya* RV. 6.58.3). He is the one who weaves cloth from wool and makes them look beautiful (RV. 10.26.6). It is to be noted here that weaving of woolen cloth preceded the cotton yarn weaving. The human society could harness the wool of the animals, much earlier than the food production.

In RV. 6.58.3 Pūṣan is messenger of the Sun.

tābhiryāsi dūtyām sūryasya kāmena kṛta srava icchamānaḥ ।

(RV. 6.58.3 b)

Tr: "Thou goest on an embassy to *Sūrya*, subdued by love, desirous of the glory."

The Vedic God Pūṣan is therefore not the manifestation of Sun God-Sūrya but an independent deity in the pantheon of Vedic Gods.

Transition from hunter-gatherer to early domestication stage -

Jared Diamond, an evolutionary biologist, points out, "It was only within the last 11,000 years that some people turned to what is termed as food production: that is, domesticating wild animals and plants and eating the resulting livestock and crops. (Diamond 1999:86). The innovations of domesticating wild animals and cultivating wild plant species went hand in hand. In the initial stages of food production the seed sowing was done by handheld digging stick, called hoe cultivation." RV refers to the hoe cultivation in a simile of copulation.

agastyaḥ khanamānaḥ khanitraiḥ prajāmaptyam balamicchamānaḥ ।

RV. 1.179.6

Here *khanamānaḥ khanitraiḥ* refers to the analogy of sowing seed with the help of a hoe i.e. pointed digging stick.

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As the domestication of animals began, society developed modes of rearing and maintaining the cattle wealth. The role of some members of the society changed from participating in hunting to tending cattle, taking them to the forest and bringing them back in the evening. That was essentially the role of herdsmen who knew paths in the forest very well, who conducted operations of animal husbandry and developed implements like awl or goad and discus missile that could be used effectively to control cattle on the move. Simultaneously the technique of growing more food also developed. It started with hoe cultivation where the seed was implanted in the earth by a sharp stick to reap crop later. As evidenced from the excavations at Mehrgarh; near Quetta in Baluchistan, beginnings of village farming communities and pastoral camps is dated around 9000 – 7000 BCE. (Possehl 2003: 8). Possehl referring to Shaffer states that "The Early Food Producing Era dates back to 9000 – 7500 BCE, when semi-sedentary communities first exploited domestic plants and animals." (Possehl 2003: 432)

In the *Ṛgveda* both the Sun and Pūṣan are referred. The Vedic God Pūṣan was the deity of cattle and knower of paths.

pūṣannanu pra gā ihi yajamānasya sunvataḥ ।
asmākam stuvatāmuta ॥ RV. 6.54.6

Tr. : "Follow the kine of him who pours libations out and worship thee. May Pūṣan gather food for us.

Pūṣan's role as the God of herdsmen, who took kine out to meadows and used goad to direct cattle, is evident in the following *Ṛcs*:

mākirneshanmākIm riṣanmākIm sam śāri kevaṭe ।
athāriṣṭābhirā gahi ॥ RV. 6.54.7

Tr.: "Let none (cattle) be lost, none injured, none sink in pit and break a limb. Return with these all safe and sound."

He wields a goad, *aṣṭram*, brandishing it all over to control cattle. It is typical of a person controlling cattle.

ajāśvaḥ paśupā vājaspatyo dhiyanjinvo bhuvane viśve arpitaḥ ।
aṣṭrām pūṣā śithirāmudvarīvājat sañcakṣāṇo bhuvanā deva īyate ॥
RV 6.58.2

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Tr.: "Goat-borne, the guard of cattle, he whose home is strength, inspirer of the hymn, set all over the world,

Brandishing here and there his lightly moving goad, beholding every creature, Pūṣan, God goes forth."

yā te aṣṭrā go opaśāḥ "ghṛṇe paśusādhanī ।
tasyāste sumnamīmahe ॥

RV. 6.53.9

Tr.; "Thou bearest, glowing Lord! a goad with horny point that guides the cows: Thense do we seek thy gift of bliss."

The words for goad, *aṣṭrā* and *aṣṭrām* occur only three times in the RV text. In all the three cases it is used in connection with control of cattle. Macdonell (1982:36) writes, "In the *sūtras*, verses to Pūṣan are prescribed to be recited when cows are driven to pasture or go astray (SGS 3.9)"

"Next to Sūrya, the Sun God, Pūṣan is revered as "the lord of all things moving and stationary, almost the same words with which Sūrya is described (RV. 1.115.1, 7.60.2). - - - - He is a guardian, who goes at the instigation of Savitṛ, knowing and beholding all creatures. - - - - - A frequent and exclusive epithet of Pūṣan is 'glowing' (*Aghrī*). He is once termed '*agohya*', not to be concealed, an attribute almost peculiar to Savitṛ. "(Macdonell 1982: 35).

Transition to agriculture

In the later stage when plough was introduced for food production, the function of Pūṣan was further enhanced to direct furrow in proper direction.

indraḥ sītām ni gṛhṇātu tām pūṣānu yacchatu ।
sā naḥ payasvatī duhāmuttarāmuttarām samām ॥

RV. 4.57.7

Tr.: May Indra press the furrow down, may Pūṣan guide its course aright. May she (*sītā* – furrow), as rich in milk, be drained for us through each succeeding year.

Invocation to direct furrow in the right direction comes in context of Pūṣan's goad to direct cattle in a proper direction in RV. 6.53.9.

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The verse RV. 4.57.7 points to need of furrowing straight. This indicates the advancement over random sowing with the help of digging stick, called hoe cultivation. Based on the accumulated experience of earlier sowings, the firmly pressed furrow when drawn straight yielded better crop.

Incidentally a furrowed field oriented North-South was excavated at Kalibangan site of the Indus culture.

He is associated with Aryaman and Bhaga, who are common to Indo-Iranian pantheon. He has distinct role to play in the lives of his worshippers. He is the God of cattle and pathfinder.

Mid day offerings to Pūṣan

Pūṣan is offered sacrificial oblation in many performances including the horse sacrifice where the goat for Pūṣan leads the way for the sacrificial horse (RV. 1.162.2-3).

The most distinctive offering to Pūṣan is *karambha*. It is traditionally known to be made up of puffed grains and curd. In RV. 3.52.5-7 *dhānāḥ* are referred which are also puffed grains and not just the raw grains of rice or any particular variety of grain.

The human society progressed by inventing techniques and tool to improve cultivation. As Diamond points out, "These inventions included sickles of flint blades, cemented into wooden or bone handles, for harvesting wild grains; baskets in which to carry the grains home, from the hill side where they grew; mortars and pestles, or grinding slabs, to remove the husks; the techniques of roasting grains so that they could be stored without sprouting; and underground storage pits, some of them plastered to make them water proof (Diamond 1999:111)."

While reaping from better techniques of harvesting, the ancient society needed ways and means to preserve and consume these grains in a convenient manner. When the food had to be preserved and consumed in locations where accessibility to cooking means was limited, human society developed technique of making puffed grains from the harvested food grains.

The puffed grains are very popular food ingredients in India even today. Rice, millet, barley are some of the most popular grains made into puffed grains. These are callsed *lāhī* in Hindi and *lāhyā* in Marathi. Puffed grains are made by exfoliating the water soaked grains on

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very hot sand bed. This technique was invented millennia ago, which is still followed with little modification (Nene: personal communication). There is class of merchants in India, who specialize in production of these puffed grains. They constitute a separate caste. They are called *bhaḍabhuñje* in Marathi in Maharashtra.

Scenario of puffed grain invention

As Diamond has proposed some instances of accidental inventions of some harvesting (Diamond 199:121) and domesticating techniques in antiquity. Taking clue from these narrations, it is possible to visualize the manner in which puffed grains were invented.

In the initial stage, human society must have understood that grains soaked in water were easier to consume than the dry grains as consumed by birds. The next stage would be to accidentally come across the instance of water soaked grains falling on heated spot on ground close to burning logs resulting in puffing. As the grains exfoliated but not burnt, these were found more edible than the just soaked grains. It was also observed that they had better shelf life. That technique was picked up. The puffed grains formed the primary processed food for the human society. Like other food items these too were offered as oblations in *yajña*.

It could not have been wild fire in the forest that could yield these puffed grains, but accidental contact of wet grains with controlled fire in closed environment.

The puffed grains had medicinal properties and could be consumed by ailing persons without any harm. RV. 1.187.10 refers to medicinal value of the fried meal of *karambha*, which became important staple food for the ancient society.

karambha oṣadhe bhava pīvo vṛkka udārathiḥ ।
svātāpe pīva idbhava ॥
(RV. 1.187.10)

Another important processed food was curd produced from milk. As the human society learnt to domesticate milch animals and consume the animal milk, in no time formation of curd must have been discovered. Curd also became an important libation in Vedic sacrifices.

Puffed grains and curd were the most preferred diet for the people on the move till the recent centuries. As the author remembers having heard from his grand parents, those who went on long journey, usually took puffed and pressed rice called *pohā* in Hindi and

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pohe in Marathi or other puffed grains of millet, with them, the so called fast food of the yore. When mixed with curd and salt for taste and with fruits slices, these made an excellent lunch. It is still called as "*dahikālā*" in Marathi. Lord Kṛṣṇa is offered "*dahikālā*" mix at the celebration of His birth in the month of *Śrāvaṇa*.

In the pre-Vedic times when herding and rearing of animals came in to vogue, the deity Pūṣan came to the forefront as god of herdsmen. As they roamed in forests, grazing their animal herds, they took with them the fast food of those times, the puffed grains for their afternoon lunch. These grains mixed with curd, they offered to their most loved God Pūṣan.

The word *karambha* and related words are used six times in the RV. text. Out of these in twice (RV. 6.56.1 and 6.572) *karambha* is offered only to Pūṣan; once along with Indra (RV. 3.52.7); twice exclusively to Indra along with puffed rice and Soma (RV. 3.52.1 and 8.91.2) and as mentioned earlier in RV. 1.187.10 its medicinal properties are referred.

Pūṣan's goats

The advancement of domestication followed in stages. The smaller mammalians species were adopted in the beginning. These were goat and sheep, which constituted the source of milk, meat and wool. The larger animals like cow, ass, and water buffalo were domesticated later. Based on the archaeological findings, goats and sheep were the second animal species to be domesticated after dog. Dog, a canine species was domesticated around 10,000 BC followed by sheep and goat around 8,000 BC. Cow was domesticated around 6,000 BC in Southwest Asia, India and North Africa (Diamond 1999:167).

A social group of herdsmen developed. They specialized in herding, rearing of animals. As wanderers in the fallow lands, they developed uncanny skills for geographical settings and could be pathfinders. Pūṣan is the God of the social transition from the hunter-gatherer stage to early animal domestication stage and early food production stage. RV. refers to all these functions of Pūṣan.

A pūṣañcitrabarhiṣamāghṛṇe dharuṇam divaḥ ।
Ajā naṣṭam yathā paśum ॥

RV. 1.23.13

Tr.: Like some lost animal, drive to us, bright Pūṣan, him who bears up heaven, resting on many coloured grass.

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pūṣā rājānamāghṛṇirapagūḷham guhā hitam ।
avindaccitrabarhiṣam ॥
RV. 1.23.14

Tr.: Pūṣan, the Bright, has found the king (Soma) concealed and hidden in cave, who rests on grass of many hues.

Hillebrandt refers to RV. 6.54 where person who is knower of paths and tracker of the lost cattle is sent by Pūṣan to his worshipper. Hillebrandt further gives the details of the social group of Khojis in Punjab and Paggis in Gujarat who till recently helped people to track the lost animals. (Hillebrandt II 1981:206) As of today the social group of Gurjars or Gujars in the north India are the herdsmen. They have been following the profession for centuries, may be millennia.

The goats are carrier animals of Pūṣan's cart. These were yoked in the early stage of domestication. While larger animals like an ox or horse could be used for cart in undulating lands, sure footed goats could be used on the plain lands, like the plains of Punjab, the Indus valley, Gaṅgā-Yamunā confluence region.

Pūṣan's treasure of discuss

RV. 6.54.3 refers to Pūṣan 's treasure of discuss.

pūṣṇaścakram na riṣyati na kośo' va padyate ।
no asya vyathate paviḥ ॥
RV. 6.54.3

This *Ṛ*c has been variously translated by different scholars.

Tr: "Unharmed is Pūṣan's chariot wheel; the box never falleth to the ground. Nor doth the loosened felly shake." (Ralph T. H. Griffith)

In the footnote, Griffith further elaborates - The box: basket, or the inner part of the car.

H.H. Wilson following Sāyaṇācārya translates as follows:

Tr: "The discus of Pūṣan does not destroy, its sheath is not discarded, its edge harm not us."

Translation by Wilson following Sāyaṇācārya appears to be valid as the discus - *paviḥ* of Pūṣan is mentioned in connection with store or treasure (*kośa*), which does not

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reduce and does not shake (*vyathate*) from the path at which it is hurled. Here the wheel i.e. *cakram* refers to circular discus of Pūṣan's whereas the *kośa* refers to collection of discuss, alternately mentioned as *paviḥ*, mounted on the chariot.

As described in RV. 6.54.3, the wheel *cakram* mounted on an axel of a chariot need not be stored in a holder. These cannot be described as deviating from the path. These need not have sharp edge that could harm.

The word *paviḥ* occurs only twice in the RV. text. In RV. 5.62.2 it occurs in connection with controlling of the cows in a cowpen. It was wielded by the dual deity Mitra-Varuṇa.

viśvaḥ pinvathaḥ svasarasya dhenā anu vāmekaḥ pavirā vavarta ||

(RV. 5.62.2b)

Tr: "Ye cause to flow all voices of the cow-pen: your single chariot felly hath rolled hither."

The translation by R.T.H. Griffith does not correctly explain how the single chariot felly can roll out. However if *paviḥ* is considered as discus, then single discus was enough to control all voices from the cow-pen. In other verse RV. 10.65.13, explaining the word *pāvīravī* Yāska clearly states *paviḥ* to be a weapon.

"paviḥ śalyo bhavati, yadvipunāti kāyam | tadvat | pavīramāyudham | tadvanindraḥ pavīravān |" (Nir. XII.30).

Tr.: *paviḥ* is a missile, as it shears body. Similarly, *paviram* is a weapon, that's how Indra is wielder of weapon.

Sāyaṇācārya too states the meaning of *pāvīravī* as *Āyudhavatī* i.e. wielder of weapon.

The discus was weapon before emergence of metallurgy and processing of metals i.e. in pre-chalcolithic period. Discus could be thrown from distance on the enemy or straying cattle to bring them back to herd. The cowherds mounted on a goat yoked chariot carried these in large numbers. That's why the word *kośa* is used. It was period of transition from hunter-gatherer stage to early domestication stage. As soon as copper weapons were invented, discus went out of use in combats.

Hero of *Mahābhārata*, Lord Kṛṣṇa, was a cowherd. He too wielded a discus called *sudarśanacakra*. It was used as weapon, a type of missile. In due course the word *paviḥ* went out of use and as the stories developed around Kṛṣṇa, it was replaced by *sudarśanacakra* i.e. decorated discuss.

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Mirzapur paintings

The district Mirzapur in Uttar Pradesh, India is known for the cave paintings in several locations. In recent years Rakesh Tewari has conducted extensive exploration of these paintings. He has listed seven clusters of these paintings totaling about 240 paintings (Tewari 1990: 51–55). Tewari has classified these paintings in XII phases. The pictures of the load bearing animals appear in the phase VI. Paintings of carts, chariots and bulls with large horns appear in phase VI. According to Tewari the paintings belonging to Phase V–VII showing pastoral life belong to Neolithic / Chalcolithic phase (Tewari 1990: 39-40). These paintings are originally painted in dark red (Allchin 1958:154), which according to recent spectrographic analysis comprise of Red Ochre pigment. (Singh & Jain in Tewari 1990: 58). Based on the use of the ochre paint, the painting belong to the time frame of 7500 - 4000 BCE (Tewari 1990:41)

These cave paintings were earlier reported 1881 by A. C. Carlleyle, then the First Assistant, Archaeological Survey of India. Bridget Allchin visited the site of cave paintings at Morhana Pahar near Mirzapur in Uttar Pradesh. She reported two horse- drawn chariots in one of the caves (Bridget Allchin 1958: 153–155).

"As is frequently the case when primitive people draw objects which they have seen, but whose use and construction they do not fully understand, they have number of obvious inaccuracies, but there is no doubt what they are intended to be. The first chariot is drawn by two horses (Picture below) and the second by four. - - - - - Both Charioteers stand alone, the first carrying a disc (*cakra*) or round shield raised in his right hand, and the second a spear or trident (*triśūla*) in his left." (Allchin 1958: 154)

The *Ṛc* RV. 6.54.3 can be better understsood in the context of the cave painting from Mirzapur. Kosambi (1962: 27) also referred to these in the context of discus weapon of the *Mahābhārata* hero Lord Kṛṣṇa.

As Allchin states the chariot with multiple, to be specific, five wheels and a person wielding a wheel in Right hand clearly indicated these additional wheels to be the *cakra*, the *sudarśanacakra* in case of Lord Kṛṣṇa. Kosambi traces these wheels to Kṛṣṇa and states, "But his (Kṛṣṇa's) antiquity is considerable, for he is the one god who uses sharp wheel, the missile discus, as his peculiar weapon. This peculiar weapon is not known to the Vedas and went out of fashion well before the time of Buddha. Its historicity is attested only by cave paintings in Mirzapur, which show riding horse charioteer (clearly enemies of the aboriginal

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stone age artists) one of whom is about to hurl such a wheel. The event and the painting may be put at about 800 BC by which date the dark god was on the side of the angels, no longer an aborigin himself." (Kosambi 1962:26-27).

However Allchin's statement that two horses drew the chariot need not be accepted fully. The animal figure does not show any specific animal form. Similarly Kosambi's statement of Lord Kṛṣṇa being aboriginal hero need not to be taken literally. Both the scholars attest however the discus missile was at one stage a conventional weapon used by the herdsmen possibly to control cattle going astray. There is no other deity than Pūṣan in the early Vedic times and Kṛṣṇa in the post Vedic period to have wielded the discus missile as a weapon. Kosambi's claim of Vedas being unaware of the discus missile can be disputed on the basis of the verses quoted from the RV. text. So the *paviḥ*, the discus of Pūṣan mentioned in RV. 6.54.3 are the discus missiles, which were some time piled in a holder firmly fixed on the chariot. As seen in the picture these were mounted on the upper part of the chariot to be easily accessible to the charioteer. These in the later period came to be known as *sudarśanacakra* wielded by Lord Kṛṣṇa.

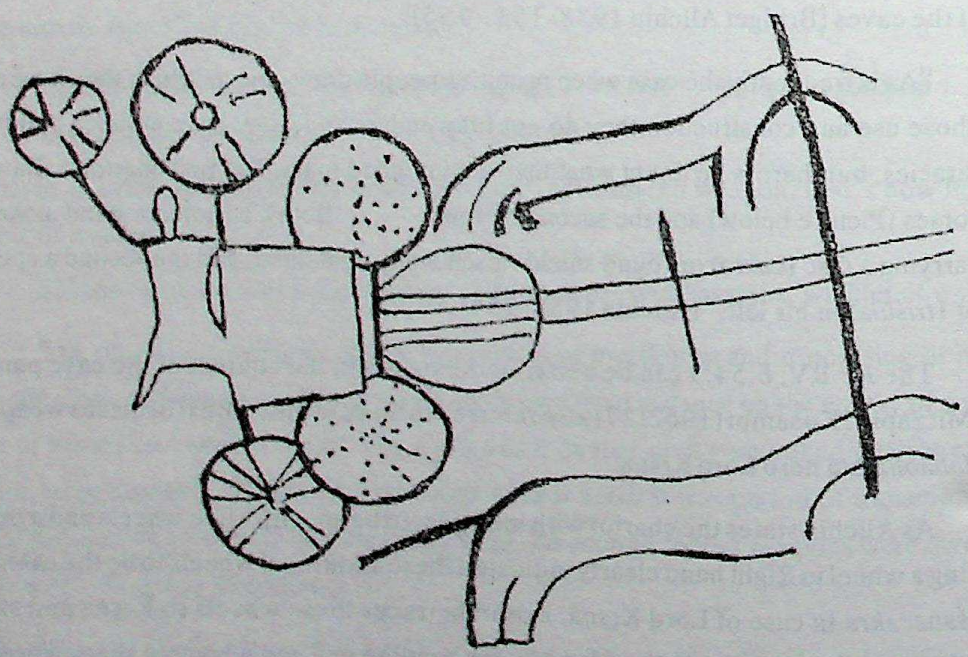

Fig. 19 Discuss-throwing charioteer in a Mirzapur cave
(D. D. Kosambi (1962) in "Myth and Reality", P 27)

This brings us to the continuity of the personal traits of Vedic and the post-Vedic gods.

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Herdsmen Gods: Pūṣan and Kṛṣṇa

There is similarity in the personal traits of the two Gods Pūṣan and Kṛṣṇa worshipped by Hindus for the last thousands of years.

- Both of them were herdsmen,
- Both of them were offered puffed grain mixed with curd,
- Both of them wielded discus type of missile.

Lord of the family way

Yet another function in the human life associated with God Pūṣan is bridging the corporal bond between the spouses. Among all the deities of the Vedic pantheon, it is Pūṣan who is praised to induce the bride to help consummate the marriage.

There is a very clear description of corporal relation between the spouses where Pūṣan is requested to motivate the bride to accept her husband by spreading thighs. It occurs in the most important hymn of the *vivāhasūkta* i.e. the marriage hymn RV. 10.85.37. The same hymn with little variation occurs in AV. 14.2.

Pūṣan being praised for the corporal relation stems from the fact that he helped the animal wealth to grow in numbers (AV. 14.1.33). Having been responsible for the mating and growth of animal kingdom, this role of Pūṣan was further extended to human relationship.

Conclusions

- The Rigvedic deity Pūṣan belongs to the transition period when human society in India transformed from the hunter-gatherer state to animal domestication and early food production stage as attested by the archaeological excavations at Mehergarh. The time dates back to 8500 BC to 7000 BC.
- As a lord of animals and knower of paths, his anthropomorphic characteristics are independent of the earlier Sun God, Sūrya.
- The offerings of puffed grains during the midday libations are the reminiscent of the very primary stages in food processing when the human society acquired the technique

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of preserving food grains for longer periods and they served as fast foods in the forests where cooking means were not easily accessible.

- The puffed grains like puffed rice and curd formed from milk formed the first processed foods of the human society.

- Puffed grains mixed with curds and fruit slices are still offered to other prominent God namely Lord Kṛṣṇa.

- The wheels of Pūṣan referred in RV. 6.54.3 are the discus type missiles. These were in use during the early Vedic period. These were probably used to control cattle going astray by hurling. Many of these were stored on a cart to be used for hurling at the cattle going astray.

- These discus missiles were used before processing of copper was invented i.e. during the pre-chalcolithic period. The weapon went out of use soon after pointed weapons could be made from copper and copper alloys.

- The Vedic God Pūṣan shares many personal traits with later deity Kṛṣṇa, hero of the great epic *Mahābhārata*.

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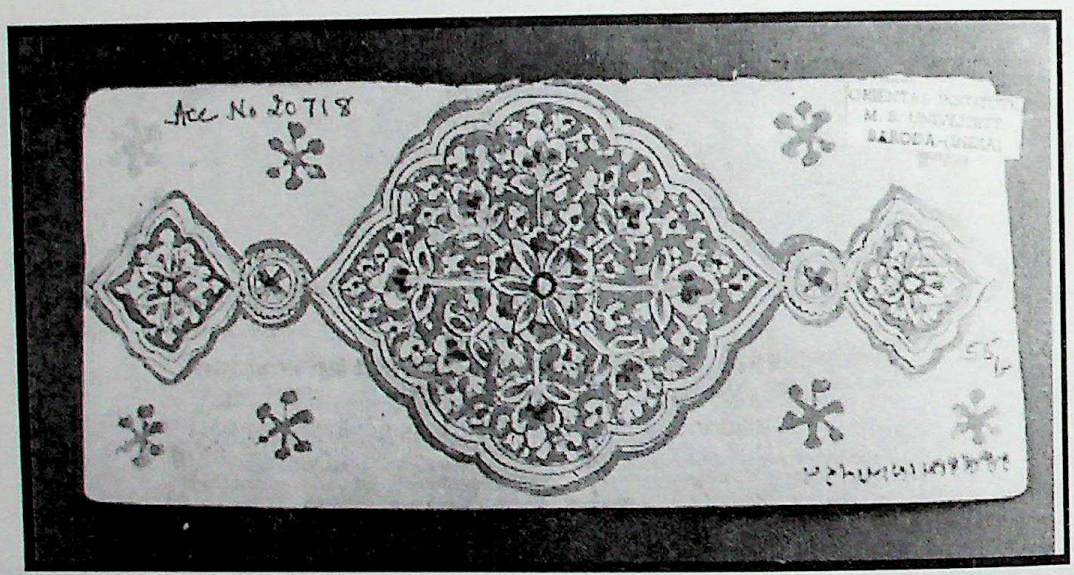

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